



Challenges Hindering School Management Support of Project-Based Learning in Fostering Critical Thinking Skills in Secondary Schools as Perceived by Heads of Schools and Teachers in Ubungo Municipality

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Abstract. *This study examined school management support of project-based learning in fostering critical thinking skills in secondary schools in the Ubungo Municipality which was guided by transformational leadership theory. The study adopted a convergent parallel design under a mixed-method research approach. The sample size of the study was 55 respondents out of 1306 population. Simple random, purposive and stratified sampling techniques were used to select teachers and heads of schools respectively. Instruments for data collection were questionnaires and structured interviews. Quantitative data adopted statistical analysis while the qualitative data were thematically analyzed. The study found that some factors such as poor learning environment, poor policy implementation inadequate financial support as well as difficulty in accessibility of teaching and learning materials hinder to the high extent the integration of project based learning in secondary schools. The study recommends that the Ubungo Municipality should provide a sufficient budget to schools so that school management can provide all necessary materials at the right time so that PBL can be effectively implemented by the teachers in schools.*

Keywords: *School Management, Project-Based Learning, Critical Thinking Skills, Learning Environment, Ubungo Municipality*

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1. Introduction

Over time, researchers and educators worldwide have recognized the potential of management support of Project-Based Learning (PBL), Project- Based Learning is a systematic teaching and learning method, which engages students in complex, real-world tasks that results in a product or presentation to an audience enabling to acquire knowledge and life enhancing skills (Chen & Yang, 2019). Project-Based Learning is a group- work

approach to teaching and learning through which students are exposed to situations regarding real- life issues and practices. Moreover, PBL improves the students' learning outcomes and develops students' abilities, especially for communication, cooperation, creativity and especially critical thinking. As students take part in the learning process, they develop a deeper understanding of content and the required skills in schools, university, work and life general (Chiu, 2020).

Wilkinson (2014) reported that in USA, project-based learning was introduced in schools and high learning institutions because they needed to show their work in front of their classmate's analysis and reflections of what they had performed. In China, project-based learning has been integrated into curriculum activities in school as teachers highlighted the value of the organization of various activities for life for learning and developing generic skills of students (Johanson, 2015). Cintang (2017) argues that development of curriculum in schools involves teachers being aware of the link between teaching subject and project –based learning methods for better teaching.

In Philippines, project-based learning effectively improves critical thinking skills of the students as they are being involved in real life practices which strengthen their thinking capacity for tackling the societal problems which make teaching and learning processes to be meaningful in secondary schools (Lapuz & Fulgensio, 2020). Moreover, through project based learning in Indonesia, learners can work within a team, find the skills to plan, organize, negotiate and make a consensus about issues of tasks that will be done, who is responsible for each task and how the information will be collected and presented scientifically which increases students' abilities which will help them in their life (Syahril, 2018).

In Malaysia, project-based learning in polytechnic colleges had great impacts to children and nation at large, the study revealed that supervisors used project based learning as crucial method to explore learners to be innovative and creative (Hyler & Gardner, 2017). In South Africa, SMT Daniel (2017) School Management Team (SMT) performs different functions in curriculum management such as enhancing teachers' professional development through planning, implementing, organizing, controlling, and assess the whole process of students learning at school. In Kenya, PBL method enabled students to improve in academic achievement as well as developing positive attitude toward classification of organisms. The Ministry of Education and its agencies adopt PBL method like other student centered instructional techniques for practical-oriented concepts like classification of organisms (Wafula & Odhiambo, 2016)

On the other hand, the Ministry of Education, Science and Technology in Tanzania through the National Examination council of Tanzania (NECTA), recognizes the potential of project- based learning activities by including them in secondary school final assessment. Hence, students have to work on project in their final year before sitting for the final NECTA. On top of that, in nearly all subject syllabi, project activities are suggested (MoEVT, 2016). Involving PBL activities in the secondary schools curriculum and in the final examination assessment indicate the recognition of the PBL is therefore, a tangible method that offers students opportunities to experience real-world tasks.

Moreover, the study done by UNESCO (2017), Mombo (2018) and Meshack (2019) respectively reported that the use of project-based learning could develop students' ability to learn both independently and enjoy working collaboratively with their friends; hence, students develop different skills through collaboration with their fellow students. PBL is a dynamic model that focuses on engaging students in higher - order thinking.

Along the same line, Ntseto (2015) asserts that the school management team contributes much to ensure that all supportive services are provided to teachers within a clear and well-organized Plan of action. This implies that the SMT should ensure that everything needed for the implementation of curriculum innovation and policies that are brought to school by the government is provided to enable the teaching and learning process to take place smoothly at school. To meet this role school management team should communicate with other educational officers and other stakeholders.

However, the study by Hakielimu (2017) in Tanzania found that only a few teachers were implementing project- based learning during teaching. Consequently, the study identified poor academic performance to students. This indicates that teaching is conducted in schools, but minimum learning is happening. Makunja (2016) reported that project- based learning has not been implemented well by teachers during teaching and learning process in secondary schools in Tanzania. This was revealed because most of teachers don't prefer to give project work to students as a part of learning which makes students to lack the critical thinking which is very essential to students. Similarly, According to Section Two of the Education and Training Policy (Tanzania 2014, 2023 version), among the objectives of the Secondary Education Curriculum is to develop knowledge and apply science and technology, creativity, critical thinking, innovation cooperation, communication, and positive attitude to students for their own development and sustainable development of the nation and the world at large. However, Makunja (2016); Hakielimu (2017); reported that project- based learning is not implemented well by teachers during teaching process, which limits the development of critical thinking skills to students. The continuation of this problem for a long in Tanzania may lead to slow down economic growth of the country, incompetent graduates and a dependent society. This is because problem may lead to poor preparation of students in school. As a results students cannot be independent, self-confident, creative and problem-solving (Meshack, 2019). This triggered to the researcher to find out the challenges encountered by teachers in secondary schools towards the integration of project based learning.

2. Literature Review

2.1 Theoretical Framework of the Study

The transformational leadership theory guided the study. It focuses on creating a cohesive unit with those being led through a clear sense of purpose, mission, and vision. The concept of the transformational leadership theory started with James V. Downton in 1973 and was expanded by James Burns in 1978. In 1985, researcher Bernard M. Bass further expanded the concept to include ways for measuring the success of the Transformational Leadership. This model encourages leaders to demonstrate authentic, strong leadership with the idea that employees will inspire to follow suit. The theory is pertinent to the current study because it offered a thorough grasp of the potential role performed by school management in assisting and supporting teachers when promoting project-based learning in the classroom. The theory is also important because it directs the study's attention to the leaders' (school management) who have a direct impact on the teachers who work with students on project-based learning. The transformational leadership theory acknowledges that for project-based learning to be successful, leaders and followers (teachers) must establish a relationship with one another (Lin & Scott, 2019)

2.2 Challenges Hindering School Management Support of Project-Based Learning in Enhancing Critical Thinking Skills in Secondary Schools

According to Utami et al. (2017) limited resources pose significant challenges to the effective management of PBL. Research has shown that adequate funding, staffing, infrastructure, and technology are essential for supporting innovative instructional approaches like PBL. Schools with sufficient resources are better positioned to provide students with the materials, equipment, and professional development opportunities needed to engage in meaningful PBL experiences that foster critical thinking skills. Mupa and Chinooneka (2015) revealed that most teachers seemingly do not employ varied teaching methods. Even if a teacher has finds that students are unable to grasp the contents he is trying to deliver, the teacher may not take the trouble to find another method that would allow students to understand what is being taught. Some teachers simply stick to textbooks rather than getting more relevant instructional materials. This implies that effective teaching and learning strategies should be practiced in government secondary schools by adhering to professional skills that teachers acquired in collage and through continuous professional development programs so as to provide adequate assistance to learners.

Also, King (2013) conducted research on factors hindering quality education in secondary schools in Mbeya, Tanzania. The findings revealed absence of reliable teaching guides, absence of action-based examinations and absence of laboratories with equipment like chemicals and apparatus. This means that teachers need to have teaching guides, there must also be

well equipped laboratories with apparatus and chemicals for science practical that make learning and education of science subject more effective. In the same vein, Tety (2016) conducted a study on the roles of instructional materials in academic performance in community secondary schools in Rombo District. The study found that instructional materials are the key to teachers and students' performance also study revealed that most of community secondary school in Rombo district suffer shortage of essential teaching and learning materials. The study recommended that the government should budget sufficient funds for improving availability of instructional materials in all secondary schools. Therefore, it is important to make instructional materials available in secondary schools to minimize the challenges of implementing PBL.

Grace and Oluwatoyin (2016) conducted research on the implication of large class size in training and studying in Nigeria. They asserted that outsized class size has negative consequences on the effective training and studying in educational institutions where the connection amongst large class size, effective training and studying is very low. Further, the study recommended that management should employ more teachers 23 if they want to admit large number of students and to make extra effort to provide more resources and facilities to encourage effective training and studying. Moreover, Abadonyi (2017) exposed that the lack of funds in schools leads to poor provision of quality education. This means that inadequate provision of funds in schools contributes to the poor provision of equality education. To address this challenge, the government should raise enough funds that support learning in education institutions in the government secondary schools.

Malunda et al. (2016) conducted a study in Uganda on instructional supervision and pedagogical practices of secondary school teachers. They comment that, the government should increase funds to facilitate in-service training programme to teachers. Heads of school as supervisors need to get training so that they can get new techniques for supervising the schools to enhance performance. To add that, government should ensure that there is enough fund in education sector which will be used to improve teaching and learning process in public secondary schools. This reflects on PBL, since its proper implementation requires more funds.

Additionally, Helluman and Ottewill (2019) stressed that, curricular and assessment practices pose challenges promoting critical thinking skills through PBL. Traditional curricular structures and assessment methods do not adequately measure or encourage the development of critical thinking skills. It's vital to align PBL objectives with curriculum standards and implementing assessment practices can help ensure that students are provided with meaningful opportunities to engage in critical thinking. Bureaucratic processes, inflexible policies, and resistance to change hinder efforts to innovate and management of PBL effectively

(Juban, 2016). Thus, it's important to create a culture that values student-centered, inquiry-based approaches to teaching and 24 learning requires strong management, clear policies, and ongoing efforts to address cultural barriers and attitudes.

Aldubbus (2018) conducted a study to investigate the possibility of applying PBL in some Bahraini primary school. It also aimed to explore the challenges that might occur during the application of PBL in actual classroom situation. Both questionnaire and semi structured interviews were employed in gathering the data. A total of 24 pre-in-service teachers in 8 schools took part in this study. The findings of the study revealed that more than $\frac{3}{4}$ of the participants were unable to implement PBL with their students. The various challenges they encountered were also identified. These included choosing a significant content, time management, monitoring and assessment and lack of facilities. Basing on the results some suggestions and recommendation were made that could help teachers and school in implementing project-based learning were offered.

Kapur (2018) conducted a study in India about the factors that lead to students' academic performance in secondary schools. The findings revealed that factors like family poverty, parent's illiteracy, lack of provision of tuitions or extra classes, inadequacy of resources, lack of planning programmes, lack of interest in studies, fear of examinations and lack of motivation to students are among factors that hinder the student's better performance in the examinations. These factors as well have implications for implementation of PBL and the related CTS However, the aspect of project-based learning in the teaching process often creates drawbacks and challenges for teachers and students. According to Harmer and Stokes (2014) there are two most significant challenges in implementing project-based learning encountered by teachers. The first challenge is non-traditional teaching in which teachers still struggle to adapt unfamiliar student-centred approach, since 25 teachers are more familiar with traditional teaching method applied in the classroom for many years. Another challenge is that teachers find it difficult to choose significant content, time management, monitoring and lack of facilities dealing with the project in teaching and learning students. Likewise, Masao (2017) assessed heads of secondary schools' supervision in teaching and learning process in Kinondoni, Dar es Salaam. The results showed that, poor teaching and learning is due to the ineffective supervision which results into failure to achieve the organizational set goals. He added that, sometimes heads of schools have a lot of activities and at the end they fail to maintain supervision. Therefore, due to a lot of work among the heads of school s it affects supervision and at the end affects teaching and learning.

3. Methodology

3.1 Research Approach and Design

The study adopted a mixed-method research approach with convergent parallel design. This is a single- phase approach where the researcher collects both qualitative and quantitative data at equal weight, analyzes them concurrently, then compares to see if the findings confirm or disconfirm each other (Creswell& Creswell, 2018).

The convergent parallel design enables the researcher to provide a comprehensive analysis of the study problem make comparison and validate findings from qualitative and quantitative data source (Creswell & Clark, 2018). Convergent parallel design helps to address the weakness of each design; hence the designs complement each other.

3.2 Population and Sampling

Population is a large group to which one hopes to apply the results (Fraenkel et al, 2015). The study had a population consisting of heads of schools and teachers. School heads were 36 while the teachers were 1270. Heads of schools were sampled using purposive sampling technique. Teachers were selected using stratified sampling technique. The sample included 5 heads of schools and 50 teachers, a total sample size of 55. The researcher separated the male teachers from female teachers and sampled each group independently via simple randomly sampling.

3.3 Data Collection Tools and Data Analysis Procedures

Data was collected using multiple research instruments to differentiate groups of respondents. The researcher used questionnaire and interview guide. Questionnaires were used to collect data from teachers. The instrument had closed and open-ended items as the study target to collect both qualitative and quantitative data. Qualitative data were collected using semi-structured interview guides to heads of schools. Qualitative data were recorded using recorder and transcribed for thematic analysis. Quantitative data which were obtained from questionnaires were analyzed using descriptive statistics with the help of statistical software called statistical package for social science (SPSS) version 20.

3.4 Validity and Reliability

The term validity according to Creswell and Creswell (2018), refers to the degree to which an instrument measures accurately what is to be measuring. Creswell and Creswell, (2018) define reliability as the degree to which an instrument yields consistent results each time that is used in present study the validity and reliability of data was endured that data instrument that used were able to produce the same results if used by other researchers. In ensuring validity, the study involved piloting, where the instruments were pre- tested in order to allow the researcher to improve their validity as well as familiarize them with data collection process. Therefore, the instruments used to collect data were able to measure

what was supposed to be measuring. The tools captured the required information from the research participants and were used to effectively respond to the research objectives.

3.5 Ethical Considerations

Ethical considerations in research are critical to ensure responsible conduct of research and the well-being of participants (Creswell & Creswell, 2018). The researcher obtained voluntary and informed consent from participants, after providing them with clear information about the study's purpose and potential benefits. Participants had freedom to withdraw from the study at any time without consequences. On the other hand, the researcher protected participants' privacy and confidentiality by make sure that their personal information and responses remain anonymous or

confidential. The researcher reported the results and limitations transparently as well as conducting the research with integrity, avoiding fabrication, falsification and plagiarism.

4. Results and Discussion

This part presents the data analysis and discussion of the findings. The findings are based on the challenges hindering school management support of project-based learning in fostering critical thinking skills in secondary school. The data were collected using questionnaires and interview guides from teachers and heads of schools respectively.

4.1 Demographic Information

Table 1: Demographic Information

Characteristics	Category	Frequency	Percentage
Age	18-27	5	9.1
	28-37	27	49.1
	38-47	15	27.3
	48-57	8	14.5
	Total	55	100
Gender	Male	21	38.2
	Female	34	61.8
	Total	55	100
Working experiences	Less than a year	5	9.1
	2 years	5	9.1
	3 years	6	10.9
	4 years	3	5.5
	5 years and above	36	65.5
	Total	55	100

Table 1 presents demographic data of the participants respectively including age, gender and working experiences. From the table it shows that majority of the participants were in the age ranges of 28-37(49.1%) and 38-47(27.3%). This signifies that participants were matured enough and knowledgeable to provide relevant data. Likewise, on gender males participated more 34(61.8%) than females, this could be attributed to the geographical location and environment whereby most female teachers request for transfer to schools located in

towns due to marital issues, however both males and females had a great contribution in data collection. Regarding working experience out of 55 participants 5(9.1%) had less than one year and 36(65.5%) had five years and above. This means that teachers have qualified skills and enough experiences in teaching students and this contributed much on gathering the appropriate data.

4.2 Challenges hindering school management support of project-based

learning in fostering critical thinking skills

Table 2: Challenges Hindering School Management

N=50 Teachers

Responses	Frequency	Percentage
Poor environment for learning	9	18
Inadequate T/L materials	8	16
Inadequate financial support	8	16
Poor policy	7	14
Overcrowded Classroom	6	12
Language barrier	6	12
Time limitation	6	12
Total	50	100

Data shows that 8(18%) of teachers suggested that poor learning environment for students is a challenging factor since most of students do not live with their parents. Majority live with single parents and others with their grandparents who do not find it easy to encourage them on the importance of education and to work hard so as to perform very well which makes them fail to accomplish the given tasks assigned by teachers in school. from the interview data HoS 1 said that “*most of students came from miserable communities and they do not concentrate on their studies when they are at home due to a numerous domestic chore, poor shelter as well as lack of electricity*”(interview with HoS 1 March 2024). As a matter fact, such a situation makes students not concentrate on what they are taught in the class since they are not fully given their needs from their families, and which makes some of them to dropout from school and become a burden to the government. The findings revealed that the highest percentage of the research participants opined that poor environment for learning stands as one of the leading challenges that many students encounter. Abadonyi, (2017) adds that infrastructural factors like lack of classrooms, libraries, teacher’s office and available laboratories for science subjects can be among of the major factors undermining provision of quality education in schools. This idea is also supported by Kipesha, (2017) in his research, which identified shortage of physical facilities, poor teaching and learning environment were some of the major aspects distributing the delivery of excellence education in government secondary schools. The study findings are thus supported by the fact that schools are faced with the poor environment for students to learn in inadequate laboratories apparatus and shortage of classes to accommodate all students.

Another, the research participants suggested that inadequate financial support is a challenge in supporting PBL in the school since the government does not provide a budget for running different activities in the school. Rather its management of the school to think about what to do so as to help the school to access important materials to be used by teachers in their work. If such a situation is given attention there will be improvement in the budget so that schools can provide materials at the right time so that teachers and students can use them and make the learning process to be easy for them. in addition to that HoS 2 said that “*likewise, the budget that is provided by the government to our public school still is insufficient that it cannot incorporate all activities in school*” (interview with HoS 2 in March 2024). The findings show that the budget provided by the government to schools is not enough to run all activities in schools hence it becomes a challenge to school management which affects the provision of the support to teachers and provision of materials which enhancing the provision of quality education. Abadonyi, (2017) exposed that lack of funds in schools leads to poor provision of quality education. This means lack of enough funds in schools contribute to the provision of low-quality education in schools. The government raises enough funds; they will that support learning in education institutions in the government secondary schools. The findings agree with those reported by Georgina (2018) who conducted the study in Namibia on the practice of project- based learning in secondary schools which give an impede in practicing project-based learning during teaching. These findings concur with this study as revealed that some believe that funding project-based learning is a problem at the same time as others do not believe in it. Hence little effort are provided

to the implementation of project-based learning which makes students not acquire the appropriate knowledge in the learning process due to insufficient of resources.

Moreover, data shows that 8(16%) of teachers suggested that inadequate teaching and learning materials hinder the learning process in the class since there is no enough books which would help learners in the learning process. Inadequate teaching and learning materials is yet another factor that undermines quality education in most secondary school in developing countries. Edessa (2016) notes that instructional materials are course contents intended to transfer essential knowledge or skills to students that should be enable them to acquire factual ideas and develop professional careers. Research conducted by Ogbu, (2015) pointed out that instructional materials help to facilitate teaching and learning, influence concrete and permanent changes in learning behaviour. Also, finding was supported by Tambwe (2017) who reported that overcrowded classes and shortage of laboratory equipment were another challenge facing teacher's use of project -based learning. Thus, it is difficult for ordinary secondary students to learn by doing using project-based learning. The findings also supported by Kussa (2016) who revealed that teachers faced different challenges in implementing project-based learning as part of competence-based curriculum like lack of teaching and learning materials such as models, maps and globe. This means that to ensure quality education in government secondary school, there must be adequate and relevant teaching and learning materials that allows effective and efficient learning to take place.

Again, 7(14%) of the participants claimed that the education policies which largely affect the education system make teachers not to focus on their careers for instance the introduction of fee free education to secondary schools discourage teachers since parents are not responsible to their duties. They send students to school without provision of their basic needs such as books which makes teachers fail to do their work in a proper way. Also, HoS 3 said that *"changes in the education policy affect the provision of education for example the policy of free education to secondary schools"*. Findings shows that teachers claimed that the changes in the education policy affect the students and teachers in performing their work. For instance, the introduction of fee free education policy at secondary level affects the teaching and learning process. Parents do not get involved in provision of needs to their children since education is free which a burden to teachers becomes in the teaching process.

On the aspect of overcrowded classrooms, 6(12%) of the teachers agreed that many students within a single class make them not effectively use the PBL as a learning approach since one class may have seventy students per single teacher. it is not easy for the teacher to know their challenging areas so that they can perform better. During the interview on HoS said that *"the large number of students is a big challenge to our public secondary*

school since the ratio of the students in the classroom is higher especially the form one student's" (interview with HoS 5 in March, 2024). This finding supported by Alsaaty and Morris (2015) revealed that the challenges of managing many high schools are compounded by steadily increasing school population with insufficient resources, which is similar to the study findings that schools receive a large number of the students each year specially form one students. Also, the implementation of fee free education policy 2016 led to the rapid increase of number of students admitted in ordinary secondary schools. This was stated by many teachers and heads of schools interviewed by the researcher in this study. The problem of ineffective use of project-based learning is due to large number of students that do not relate to the available resources.

Additionally, the respondents offered that language barrier contributed much as a constraint that blocks many students from understanding what they are taught in the class. Due to poor background of students, they feel that they a new to secondary school subjects, since you may find students at form four level, he or she fails to express themself in front of mass hence even in the learning process it takes time for students to understand. On the interview one participant said that *"Language it is a big challenge to our students especially the form one students due to poor background on English"* (interview with HoS 4 in March 2024) Also, Masenyi (2014) examined factors that lead to student's poor performance in English subject in secondary in Magu District in Tanzania. The study employed a descriptive survey research design in data collection. The study found that students lack competence in English language because they lack support from parents and the community in which they live. Therefore, failure in English language leads to failure in other subjects because in secondary schools all subjects except Swahili subject are taught in English. Understanding of English language is the basis for understanding other subjects, that language is a big challenge to students especially the form one students.

Finally, the respondents indicated that time is a limiting factor in the learning process since all activities done have indicated time to accomplish them. Thus, management has to find extra time so as to make learners obtain all necessary knowledge in their studies such as through remedial and special classes in the morning for examination classes to make them competent. Therefore, in order for students to be more engaged in the learning process the curricular planners have to indicate enough time in the syllabus that allows teachers to involve learners and also activities that directly reflect real life situations that learners will gain good knowledge and use it for life. Finding revealed that for students to gain knowledge there is needs for time for them to learn and apply what they learnt in the class, for that fact there is a need for teachers to set their timetable in a proper way so that students can benefit from the learning process and activities. Project based learning typically involves extended time frames, allowing students to engage in

deep exploration and problem solving (Meganyi et al., 2020). However, time constraints in the academic calendar may limit the duration available for project-based learning this become a challenge in effective implementation of project-based learning while ensuring the coverage of required content.

5. Conclusion and Recommendation

5.1 Conclusion

The study concludes that the management challenges existed as seen in the shortage of financial support, time limitation, language barrier and overcrowded classrooms which made it harder for teachers to facilitate large classes in the learning process and use project-based learning as the teaching method to students. Head of schools faced delays in receiving teaching and learning resources, finally fee free education policy resulted into the resistance from parents to contribute for education.

5.2 Recommendation

Based on the findings of the study, the researcher recommends the following for better improvement of integration of project-based learning in school environment.

1. The government should increase funding to education sector in exponential rate. This will lead to construction of new classroom, libraries, laboratories and other school infrastructure. Furthermore, the government of Tanzania should revise the fee free education policy to cost-sharing education policy.
2. The government should give clear directives for parents to support various curriculum and extra-curricular activities that need fund to make easy for students to be engage fully so as to obtain critical thinking skills which is very essential in 21st century.
3. Further research could be conducted to private secondary schools about implementation of Project Based Learning.

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