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ABSTRACT

Globally, policy reform in education has recommended learner-centered pedagogy for more than a century, but its practical implementation remains an illusion in many classrooms. This study describes history teachers' experiences while experimenting on project-based learning (PjBL) in Zimbabwe's current curriculum reform initiative. Project-based learning has gained acceptance as an indispensable approach in developing learners' 21st century skills of creativity, critical thinking, research, and problem-solving. Using a qualitative multiple-case study, four history teachers were observed and interviewed while implementing PjBL at four secondary schools in Zimbabwe. Results indicate policy failures with learner-centered pedagogy. Where some participants and their students had made significant progress, others had done very little at the time the policy reformers withdrew the projects. Feasibility studies could have circumvented some of the pitfalls experienced while enacting PjBL.

Keywords: 21st century skills; Learner-centered pedagogy; Policy failure; Project-based learning; Reform implementation.

Introduction

Implementing learner-centered pedagogy in traditional school and classroom settings is a complex challenge in most countries (Condliffe, 2017; Culclasure, Longest, & Terry, 2019). This is mainly because learner-centered pedagogy in general and project-based learning (PjBL) in particular require teachers and learners to shift from traditional didacticism and move towards inquiry-based, problem-solving approaches. Consequently, learner-centered pedagogy and PjBL have not been popular with teachers and students who are used to orthodox classroom practices and summative high-stakes examinations (Major & Mulvihill, 2018; Peskova, Spurna, & Knecht, 2019). To realize learner-centered pedagogy, both teachers and students have to change their mindsets and embrace new roles and new ways of thinking, interacting, and communicating.

The New Curriculum Framework in Zimbabwe (2015-2022) aims at "the development of new skill sets that enable citizens to live and work competitively in the global village" (MOPSE, 2015a, p. 2). To achieve this, the new curriculum advocates for "learner-centred and multi-sensory approaches" that include discovery, research, and PjBL, among other approaches (MOPSE, 2015b, p. 2). The research projects in Zimbabwe's new curriculum aim at developing "communication, problem-solving, self-management, interviewing, organisational and writing skills in learners" (ZIMSEC, 2017a, p. 3). Thus, Zimbabwe's new curriculum, like most current curriculum reform initiatives throughout the world, aims at developing 21st century skills through PjBL. The 21st century skills embedded in PjBL range from creativity, digital literacy, critical thinking, problem-solving, proficient communication, research efficacy, entrepreneurship, diversity, and global citizenship, among other skills (Chalkiadaki, 2018). Drake and Reid (2018) emphasize that "students can

no longer simply memorise a collection of facts to pass a test. They need to manage and make sense of huge amounts of data and be able to problem-solve the complex issues of the day” (p. 32). PjBL is one learner-centered approach that is appropriate for solving the complex problems of the 21st century.

Purpose of the Study and Theoretical Framework

The purpose of this study is to understand the policy-practice gap that exists in the implementation of learner-centered pedagogy in Zimbabwe. Four case studies from a Zimbabwean experiment on PjBL were used, with four history teachers as participants. This paper fills in some of the gaps evident in existing literature on the practical challenges teachers face while implementing PjBL, despite well-intentioned reform policy. The aims of the paper, therefore, are to understand the experiences the history teachers went through while experimenting with PjBL (for the first time) in Zimbabwean secondary schools, and why the policy-makers rushed to withdraw this innovation after only one school term of implementation. To achieve these aims, three research questions guide this paper:

- (a) how did the history teachers receive and implement project-based learning?
- (b) how can the factors that contributed to the early withdrawal of project-based learning be understood and explained?
- (c) how can the future implementation of project-based learning be enhanced?

This study focused on history teachers for two main reasons. Firstly, in many countries including Zimbabwe, secondary school history is often taught using teacher-centered methods and assessed through open-ended essays in summative examinations. The introduction of PjBL was a novel innovation which demanded learner-centered pedagogy and continuous assessment. This aroused the researchers’ interests to investigate how history teachers were responding to this change and implementing it. Secondly, the first researcher has 10 years’ experience as a history teacher and 20 years as a history lecturer; the second researcher is a policy implementation specialist. Thus, history curriculum reforms fall within the scope of their expertise, experience, and research interests.

The theoretical foundation for this paper is the constructivist paradigm, which acts as a “blueprint” (Grant & Osanloo, 2014, p. 12) for informing and guiding this study. Constructivism assumes that students are active creators of knowledge and teachers must create rich learning experiences that guide learners in making sense and meaning of what

they are learning (Bas & Senturk, 2019; Krajcik & Blumenfeld, 2010; Major & Mulvihill, 2018). It provides viable alternatives to traditional classroom practice which makes the teacher “the sage on the stage” (Schwerdt & Wuppermann, 2011, p. 62) while marginalizing learners to passive sponges of processed information. Bas and Senturk (2019) emphasize that “the constructivist approach requires learners to construct what is learned in their minds and make meaning in the learning process based on their experiences” (p. 167). PjBL is one instructional approach which allows learners to construct new knowledge as they seek to solve real-world problems that affect them and their communities, instead of reproducing the knowledge they receive from teachers.

We found constructivism useful in exploring the participants’ experiences as they experimented with PjBL in Zimbabwean secondary schools. This is because teachers are active creators of knowledge as they make conscious and unconscious efforts to give meaning to new curriculum policy and how it is likely to change their practice in the light of the knowledge, skills, and beliefs they already possess (Marz et al., 2013; Virtue & Hinnant-Crawford, 2019). Constructivism provided a blueprint for examining and explaining why history teachers developed different meanings and attitudes towards PjBL as an approach for promoting learner-centered pedagogy. This made constructivism an appropriate research paradigm for studying the implementation of PjBL as a learner-centric reform initiative.

Literature Review

Project-based learning and problem-based learning

A pigeon-hole definition of PjBL is difficult, if not impossible and undesirable (Condliffe, 2017). The definition of PjBL becomes even more problematic when one considers Grant’s (2011) observation that “many of the principles of project-based learning [PjBL] are common to problem-based learning [PBL] as well” (p. 28). It appears PjBL and PBL are two sides of the same coin. Despite the many common elements between PBL and PjBL, Albritton and Stacks (2016) advise that there are distinct differences between these two concepts.

While PBL and PjBL share many common elements like prolonged engagement with an identified problem, in-depth analysis, self-regulation, and collective collaboration, what ultimately distinguishes the two is the final product at the end of each process. Grant (2011) summarizes the difference between PjBL and PBL by stressing that “the production of a learning artefact is what consequentially distinguishes project-based learning from problem-based learning” (p. 38). The difference is that, in PBL, the product is a solution

to the problem; whereas in PjBL, the product is an artifact produced in response to the question that drives the project. The artifact may be a research write-up, a creative piece of art, a model or a prototype scientific product that provides a solution to a clearly defined problem.

In PjBL students engage “in learning knowledge and skills through an extended inquiry process structured around complex, authentic questions and carefully designed tasks” (Markham, Larmer, & Ravitz, 2003, p. 4). The challenge or problem to be investigated is set by the teacher and the students to suit their interests, skills, and resources available. With the teacher’s guidance, students work on artifacts which provide solutions to a problem through prolonged engagement. This artifact can be a written report, or a concrete object which solves a practical problem, depending on the nature of the subject. For example, in a poor peri-urban area in Western Kenya (in Africa) where there is no tap water, two high school science students used recycled plastic containers and cheap metal to produce a prototype hand washing machine which is operated by foot to reduce the spread of COVID-19 (Wanzala, 2020). In developed countries, where the internet is often available, history students can conduct an internet-based research project on disease outbreaks in the ancient world and produce a written report on how these pandemics were contained. This project can be time-framed to be completed in one school term, or longer, depending on the depth and scope of the research. This paper views PjBL as a higher-level extension of PBL within the wider matrix of learner-centered pedagogy.

The philosophy of project-based learning

The thinking behind PjBL, as articulated by Krajcik and Blumenfeld (2010), is “to allow students to learn by doing and applying ideas ... It is based on the constructivist finding that students gain a deeper understanding of material when they actively construct their understanding by working with and using ideas” (p. 317-8). PjBL is a teacher-facilitated approach to learning which is student-driven. The research problem must capture students’ interest and be within their cognitive and material resource capability to interrogate and solve. Larmer, Mergendoller, and Boss (2015) place “the problem” at the center of the research project and advise that:

The heart of the project is a problem to investigate and solve, or a question to explore and answer. It could be concrete (the school needs to do a better job of recycling waste) or abstract (deciding if and when war is justified). An engaging problem or question makes learning more meaningful for students. They are not just gaining knowledge to remember it; they are

learning because they have a real need to know something, so they can use this knowledge to solve a problem or answer a question that matters to them. (p. 1)

As in all learner-centered pedagogies, the teacher’s role in PjBL is multi-faceted but not traditional. S/he acts as a guide, facilitator, and manager, not a transmitter of pre-packaged knowledge, as is the case in traditional pedagogy.

The Buck Institute for Education (2015) came up with what it calls “The Gold Standard of Project-based Learning” (p. 1). This model provides seven principles to be followed by teachers and learners when conducting research across all the learning areas in elementary, primary, and secondary schools. The seven principles are: identifying a challenging problem which is real; sustained inquiry into the problem identified; reflection on the authenticity of the problem; student voice and choice during data collection; analyzing and reflecting on the data collected; critiquing and revising research findings; and disseminating the research findings as a final product inside and outside the school.

Why project-based learning often fails

Although PjBL has a longer and richer tradition in the developed world, its implementation still remains problematic, even in well-resourced countries (Culclasure et al., 2019; Grant, 2011; Savery, 2006). Savery (2006) established that when teachers adopt the PjBL approach, they face the problem of transitioning from knowledge providers to facilitators of learning. Unwittingly, most teachers resort to what they are used to: didactic instruction. The demands of high-stakes standardized examinations, that call for declarative lower-order knowledge, also force teachers to remain rooted in (or revert to) traditional rote pedagogy so that they drill students to pass examinations. In a recent study by Culclasure et al. (2019) in three public schools in the USA, two of the schools had to abandon PjBL after only one year of implementation. The teachers complained that the reform was time wasting, too demanding, and did not allow them to prepare learners for examinations.

PjBL in the developing world in general, and in Africa in particular, is still in its infancy and struggling to take root in the classroom (Tabulawa, 2013; Taylor & Robinson, 2019). Most poorly resourced African schools are still heavily dependent on teacher-dominated instruction. In Botswana, for instance, Major and Mulvihill (2018) established that “it is widely known that teachers teach the way they were taught; therefore, if problem-based learning is the desired approach, they [teacher educators] must be demonstrating PBL, not just espousing its usefulness” (p. 3). They found that most teachers in Botswana, like most of their counterparts in the developing world, do not use learner-centered pedagogy

because they were trained using the lecture method. When mother cow chews the cud, the calf will be learning one or two lessons, advises one African proverb!

The situation appears not to be so different in Kenya, Uganda, Ghana, and Mali. In these countries Taylor and Robinson (2019) found that, although most of the secondary school teachers have degrees in education,

They experience significant difficulties in attempting to adopt a constructivist view of knowledge. They tend to view knowledge as fixed, objective and detached from the learner and believe that it is the teacher's function to transmit knowledge to children, usually through rote learning techniques. (p. 33)

Thus, despite many policy reform initiatives, learner-centered pedagogy in general, and PjBL in particular, remain a mirage in many African countries.

Project-based learning in Zimbabwe

Experimenting with PjBL in Zimbabwean secondary schools is the most conspicuous innovation ushered in by the New Curriculum Framework (2015-2022) currently under implementation. The research projects were introduced in all the subjects offered in the secondary school curriculum. Although the new curriculum was disseminated into schools in January 2017, the research tasks (projects students were to research on) only reached the schools in October 2017. The reasons for the delay in disseminating the research tasks into schools were never explained by the reform authorities. This paper examines how history teachers in one urban school district in Zimbabwe received the research tasks and implemented them with their classes during the third term of 2017. The paper also delves into the reasons why these research projects were later officially removed from the curriculum in March 2018, after the history teachers and students had spent time, energy, and resources working on them in the third term of 2017.

Methodology

This paper adopted a qualitative multiple-case-study design focusing on each of the selected history teachers as an independent classroom practitioner with the professional autonomy to decide how to support and guide learners in carrying out the research tasks. Minichiello and Kottler (2010) advise that "qualitative researchers observe people in their natural setting so that they can learn from them about what they are thinking, and more importantly, why they think and act the way they do" (p. 12). We found the multiple-case approach to be an appropriate research design for examining history teachers' experiences with PjBL and

seeking plausible reasons to explain why the research tasks were withdrawn from the curriculum after only one school term of implementation.

Four schools were purposively sampled from 13 targeted secondary schools in Chitungwiza, a dormitory town located 30 kilometers southeast of Harare, the capital city of Zimbabwe. The selected schools were considered to have the best teaching-learning resources in this residential town, based on the information given to the researchers by the curriculum supervisory authorities. Purposive sampling was used to select one history teacher from each of the four schools, giving a total sample size of four cases. The selection criteria were that: the participant had a minimum of a degree in history and a diploma in history pedagogy; more than five years' experience as a history teacher; was pioneering the new history curriculum with a Form 3 class (15- to 16-year-old students); and was willing to be observed teaching the same class over eight weeks.

The first step in the data collection process was the identification and collection of curriculum reform policy documents produced by Zimbabwe's Ministry of Primary and Secondary Education. Data collection and analysis in this qualitative multiple-case study took place concurrently and iteratively. Creswell (2013) advises that data collection and analysis in qualitative studies must be conducted in a cyclical, concurrent, and iterative manner. This enables researchers to move forward and backwards so that they gather evidence several times, allowing them to check the trustworthiness of the data and glean new insights in a reflective manner; rather than conducting data collection and analysis as once-off activities. The iterative approach allowed for comprehensive data gathering and sense making of what official documents expect teachers to do when implementing the new reform of PjBL.

The curriculum reform documents collected in the current study were the policy frameworks, official circulars, history syllabi, and research-task guidelines, so that researchers could gain insights into what official reform policy expected teachers to do in implementing the new curriculum policy of research-based learning in history. History teachers' schemes of work, lesson plans, and class timetables were also collected and analyzed using a pre-formatted document analysis protocol created for the purposes of the current study. The main qualitative document analysis technique used was interpretive content analysis (Bowen, 2009); which made use of a priori codes like innovation, policy requirement, project-based learning, and learner-centered pedagogy.

The second stage in data collection was the conducting of a pre-observation interview with each of the four teachers. A pre-formatted semi-structured interview protocol was used. The questions in the pre-observation interview checked on teachers' levels of preparedness and knowledge on how to

assist learners carry out the research project. Existing literature (see for instance Ganon-Shilon & Schechter, 2017; Condliffe, 2017) has shown that, oftentimes, teachers lack knowledge of the reforms they are expected to implement. Consequently, the reforms are often not implemented as envisaged by policymakers, if at all.

The third phase of data collection involved intensive non-participatory lesson observations. Lesson observations were conducted by the first researcher in each of the four classes over an eight-week fieldwork period. A lesson observation protocol was used to collect data during the lesson observations. The plan was to observe each teacher teaching the new history curriculum twice a week, giving a target of 64 lesson observations. However, due to unanticipated interruptions (like staff meetings, invigilation, and cultural festivals), a total of 47 lessons were observed.

The intermittent interview was the fourth stage in data collection and analysis. It was conducted with each teacher after four weeks of lesson observations to understand how each teacher was implementing the new policy of project-based learning with his/her Form 3 class and the challenges they were encountering in enacting this learner-centered pedagogy. The fifth (and last) stage in data collection was the exit interviews held after eight weeks of lesson observations. The purpose of the exit interviews was to close off the eight-week fieldwork period and make sense of the progress and setbacks encountered by the teachers and students in conducting and finalizing the research-project.

Data collected from the interviews, lesson observations, and documents went through the final processes of qualitative analysis using open and axial coding. Using guidelines provided by Corbin and Strauss (2008), open coding was used to pick out common words, phrases, and practices in the documents, transcribed interviews, and lesson observations. Data from the documents, interviews, and lesson observations were interpreted, coded, and segmented into categories using the following a priori codes: innovation, policy requirement, teacher reaction, positive attitude, policy compliance, excitement, rewarding, negative attitude, resistance, rejection, depression, and non-compliance. The aim in open coding the collected data was to determine history teachers' compliance (or non-compliance) with policy guidelines as they guided students in carrying out the research projects. Using the open-coded data, an intra-case analysis for each teacher was developed into a narrative profile.

Data generated from the four intra-case analyses was then collated to enable a cross-case analysis of the four case studies. Axial coding (Allen, 2017) was used to pick out similarities and differences in what the four teachers said in the interviews, wrote in their schemes of work and lesson plans, and did during lesson observations. Axial coding identified

relationships among the open codes and enabled cross-case analysis of data generated from the four history teachers. Data from lesson observations was used to cross-check the credibility and trustworthiness of what was coming from the interviews. Lesson observations also authenticated the history teachers' compliance (or non-compliance) with policy requirements as stipulated in the research project guidelines. Each teacher's unique perspectives and practices on PjBL were noted and recorded in an intra-case profile for each case study. Common ideas and practices were clustered and aggregated into emerging themes which are used to present a cross-case analysis after the case-by-case profiles.

Findings of the Study

Each history teacher's unique perspectives and practices on PjBL are presented as storied narratives, culminating in four case study profiles. A cross-case analysis and synthesis of the four profiles resulted in the emergence of two themes that help in explaining why PjBL was withdrawn from the curriculum by the reform authorities after only one school term of experimenting with the innovation. The two emerging themes are: PjBL as a novel (but difficult) innovation and negative attitudes towards PjBL. Below are the narratives of the four case study profiles.

Profile 1: Angela's case study

The first participant, Angela, taught Form 3A at Arise, a government day secondary school in Chitungwiza. The class had 49 students. In the intermittent interview, Angela was asked to explain her attitude towards Continuous Assessment Task 1 (the official jargon for PjBL in Zimbabwe). In her combative voice, she responded: "It has never been positive. Yes, we are implementing because that is what we are instructed to do. The implementation is actually dictated upon teachers. But I think the tasks are a total failure." On probing why, she calmly explained: "Most of these students reside in one area and so they interviewed the same councillor at the same time, who gave them the same information. I think some students just copied from others." Angela was also bitter that:

Asking pupils to interview these politicians—this field is male-dominated. If you look at the councillor, the MP, and the mayor, they are all men. The girlchild will end up looking down on herself—that they cannot achieve anything. The headman, the chief, they are all males. They are sending wrong messages to the girlchild that they cannot venture into male territory.

The rights of the girlchild was a recurring theme in the three interviews held with Angela. This gender sensitivity was probably a result of the nature of her advanced degree

studies as she holds a Master of Science in Development Studies from the Women's University in Africa in Harare. Her unfulfilled initial career aspirations to be a lawyer, police officer, or nurse may also have had a bearing on her sense of social justice and gender equality.

Angela also complained that teachers were not adequately prepared for the implementation of PjBL and the new curriculum: "It was too late when we were informed of the new curriculum in Third Term 2016, and the workshops held were simply insufficient. In fact, we did not learn anything from the single workshop mainly because all departments from different subjects were in the same room, whether history, economics, mathematics..."

The tasks also affected her content coverage for Third Term 2017. "I failed to look at the Scramble and Partition of Southern Africa; I did not do the Colonisation of Zimbabwe; not to talk of the First Chimurenga," she lamented. A document analysis of Angela's schemes of work (lesson plans) showed that she had not planned for the PjBL research tasks. Asked why, she explained that: "We scheme for our lessons during school holidays, as required by policy, so I did not plan for these tasks because we had not received the research project guidelines when schools closed in August." Angela was observed taking time from her planned lessons to assist students' work on the tasks because no time was allocated for the research tasks on the school timetable. After receiving the task on her phone from the school administration on the 11th of October 2017, she wrote the task and the key guidelines on the chalkboard for the students to copy so that they could start working on the research project.

Initially, Angela did not want to assist students much, arguing that "the rules and regulations of the tasks are that the teacher should desist from teaching the learners the task." A perusal of the Continuous Assessment Task 1 Guidelines indicated that "teachers must guide students in carrying out the research, they must not do the research for the students" (ZIMSEC, 2017a, p. 3). It appears that Angela, at first, did not give students enough support to do the research task—as required by the policy. But after realizing that students had not done much on the analysis of the data they had collected, and that time was running out (because the task was to be completed in one term), Angela allocated two lessons to the tasks. On the 1st and 6th of November 2017, she used individualized instruction as she moved around the class checking on progress made and making recommendations on how students could complete the research projects. Each student was assisted according to need, which was a constructivist approach, although (on reflection) our feeling is that this assistance could have come earlier.

During the exit interview held on Tuesday, 14 November 2017, Angela explained that she had pushed the students to complete the tasks in one month. She pointed to a large heap of flat files in her storeroom-cum-office and said, "As you can see, these are the files and most of the students have handed in the project. I think only five or six are outstanding, out of 49, but they promised to bring them tomorrow." Although she did not like the way the tasks were disseminated into schools and felt that the time allocated to complete them was not enough, Angela supervised the tasks to completion as required by reform policy. Angela was a coerced implementer of PjBL because the Secretary's Circular No. 2 of 2017 instructed that "internal and external supervision shall be undertaken to ensure effective implementation of the New Curriculum" (MOPSE, 2017a, p. 8). Thus, Angela supervised PjBL under duress, fearing penalization for non-compliance. That is why she complained that "the implementation is actually dictated upon teachers." Angela's case is a typical illustration of implementing PjBL under duress.

Profile 2: The case of Bessie

Bessie appeared to have received PjBL with a completely different spirit, compared to Angela. She taught Form 3B at Bridge High School, another government day secondary school sampled in this study. In the intermittent interview, Bessie explained her reaction to PjBL:

I have embraced it [PjBL] because it has got its own advantages. Pupils can do their own researches and you as the teacher, you try to evaluate what they have discovered. And then, at the end of the day, you will be able to conclude that pupils have gained communication skills, analysis skills, and writing skills. So, I think this is something new coming up.

Unlike the other three history teachers in this study, Bessie was not critical of the new curriculum and PjBL, although she only received the research task on the 4th of October 2017, three weeks after schools had opened for the third term. She explained her attitude towards the new history curriculum and PjBL:

My attitude was changed by going to the university to do B.Ed. in History. Prior to that, I gave pupils notes and sometimes never cared to explain them. But when I came back beginning this year 2017, I started to see the teaching of history with another eye, with another view. I was so stimulated, so motivated by the new curriculum because while at university, we were equipped with various skills that are learner-centered, like research, seminars and presentations. This helped me a lot. My B.Ed. training helped me accept the new curriculum.

Thus, Bessie had a favorable attitude towards the new history curriculum and the implementation of PjBL because of the training she had received at the university during her B.Ed. degree programme.

However, the research tasks, which she had not planned for (as reflected in her schemes of work), had a negative impact on her content coverage for the term. Bessie was observed taking time from planned learning activities to assist learners to interpret the research task, prepare the interview guides, analyze the findings, and do the research write-ups. After receiving the task, Bessie summarized the key points from the 10-page task document (ZIMSEC, 2017a) on the chalkboard for students to copy. She did this because the school could not afford the cost of photocopying the document for all 45 students in her class. In all the lessons following reception of the task, Bessie was seen setting aside five to ten minutes towards the end of the lessons to assist students to work on the task. After realizing that her students were lagging on the tasks, Bessie allocated a whole 35-minute lesson to assist them on the task on Monday, 6 November 2017.

Because of the lesson time used to cover the tasks, Bessie failed to teach the Colonization of Zimbabwe and the First Chimurenga, topics she had planned for in her Third Term 2017 schemes of work. Still, Form 3B students failed to complete the research tasks on time. This is how Bessie explained her dilemma in the exit interview on the 13th of November 2017:

I can foresee that some pupils will not be able to clear the task before the end-of-year examinations start on Friday, 17 November 2017. I can see by the way they are responding. I have received only four complete research tasks in a class of over 45 students. And today is Monday and we are talking of examinations this Friday. Even if I use the iron rod to push them, it won't work.

What could have been the reason for students' lack of progress in doing the task when Bessie had had a positive attitude towards PjBL? She also greatly supported and encouraged students to do the research. This is how she tried to account for her students' lack of progress:

It might be that pupils have developed resentment. They ask: "What are all these tasks for?" It's across all learning areas. It's a burden to them. If they are doing eight subjects, they have eight tasks; if they are doing ten, they have ten tasks. So, students are not happy because the work is overwhelming. And next year (2018) they are expected to do more tasks in every subject, again.

A document analysis of Continuous Assessment Implementation Guidelines for Schools showed that students were expected to carry out a research project in all the subjects they were doing every term (ZIMSEC, 2017b), giving credence to Bessie's complaint that students were overburdened by the research tasks. Besides being overwhelmed by the research tasks, most of the students in Form 3B were perceived to be of average and below average ability by their teacher. As a result, they faced serious language problems in doing the research projects. Poor command of the English language may partly explain why Form 3B students had a negative disposition towards PjBL in history and were unable to complete the research task by the time Third Term 2017 had come to an end. Despite learners' failure to complete the PjBL task, Bessie had a positive disposition towards research-based learning. Bessie's case study illustrated implementation dilemma despite policy acceptance.

Profile 3: David's case study

The third participant was David. He taught Form 3D at Delta High School, a mission day secondary school in Chitungwiza. Form 3D had only 20 students who had voluntarily chosen to take history, while the other 20 students in the class had opted for biology. David received Continuous Assessment Task 1 on the 4th of October 2017, approximately three weeks after schools had opened. Like the other three cases in this study, he had not planned for the research task in his schemes of work for Third Term 2017 because, in Zimbabwe, policy demands that schemes of work are prepared before schools open. This is how David described his experiences with the new reform policy and PjBL:

I did not want to use this term but let me use it; the introduction of the reforms has been chaotic. The inclusion of the research tasks was not done properly. In fact, the introduction was haphazard. There was no uniformity. Different schools received the research tasks at different times. That's why I say the implementation was chaotic.

To give his Form 3D students enough theoretical grounding on why and how to carry out research, David had to meet his students outside the official timetable. He had to find time to assist learners in constructing the interview guide, collecting and analyzing the data, and writing the research report. He complained that:

No time was allocated on the timetable to assist learners work on the tasks. Students must know why they conduct research, define a research problem, and outline the steps and structure of a project. You cannot simply send students to go into the community and collect data without discussing methods or

strategies we use to collect data, such as interviews, developing questionnaires, and how to analyze the data. This can only be done after some lessons.

An analysis of Form 3D's class timetable showed that no time had been allocated for the research projects, not only in history, but in all the ten subjects the class was taking. The main advantage David had in implementing PjBL with Form 3D was that there was no hot seating at Delta High, so classrooms were always available for use after school. David and his class were observed making use of the vacant classrooms to work on the research task. Angela and Bessie, unfortunately, did not have the same privilege at their respective government day schools, where there was hot seating and the classrooms were always occupied throughout the day.

The other advantage David had was that Form 3D had only 20 students doing history. This was less than half the class sizes in the two government day secondary schools sampled in this multiple case study. David's 20 students were interested and highly motivated to work on the research project, and he could easily monitor and scaffold their efforts. In one of the interviews, he confidently remarked that "the 20 who chose to do history are of above average intelligence and the number is an appropriate class size for the new curriculum. So, I expect a 100% pass rate." The teacher-pupil ratio for secondary schools in the new curriculum is in fact 1:35 (MOPSE, 2015a), meaning that David's class was far below the officially prescribed class size. In the exit interview on 14 November 2017, with a smile of satisfaction, David informed the first researcher that "all of them have handed in their research tasks and I am almost through with the marking." David tried to be compatible with reform policy although he believed that PjBL was introduced in a chaotic manner.

Profile 4: The case of Emmy

Emmy, the fourth participant, taught history to Form 3E at Exit High School, the only boarding school sampled in this study. The class had 49 students. She expressed her sentiments towards the new curriculum in general, and PjBL in particular:

The introduction of the research tasks, I did not like it per se, but we were forced to like it. We don't have any choice, especially that now everyone has to do the new curriculum. We don't have a choice, so we have received the Continuous Assessment Policy and we are in the process of working on the research tasks that we were given. But I think they have to revise the tasks—they cannot be done in all the subjects.

Emmy, like Angela, saw the research-based tasks as an imposition on teachers, but she had no choice except to accept and implement them since it was government policy. Although she felt that PjBL was imposed on teachers, Emmy was still willing to learn new practices. She explained that:

We have little knowledge on the research task aspect but will continue to find guidance from others. Even the construction of the interview guides, we will ask other teachers who are knowledgeable so that we work together. We work as a team with other teachers. We have to learn new things; it's a continuous learning process because we have not been doing it before. We cannot escape learning new things as teachers.

Initially, Emmy disliked the tasks, but once she had received Continuous Assessment Task 1 on the 3rd of October 2017, she was willing to acquire new knowledge as she experimented with the innovation. She was observed with Form 3E working frantically and enthusiastically on the PjBL task, despite the large class size.

Emmy gave each of the 49 students in her class the 10-page research task document (ZIMSEC, 2017a), which she had photocopied with the support of the school administration. A document analysis of Emmy's schemes of work, like those of the other three teachers in this study, revealed that she had not planned for the research projects because she had written the schemes before receiving the research tasks. It became a habit for Emmy to take five or more minutes at the end of her planned lessons to guide and assist students on the tasks. Her support was evident during the construction of the interview guide for the local MP, data analysis, and final research report write-up. With the support of the school administration, Bessie made logistical arrangements to invite the local MP to Exit High School so that the 49 students could interview him all at once after school hours. This means that all the students collected data from the same informant at the same time. So, by the last week of October, all Form 3E students had started working on the final research write-ups for their PjBL task in history.

Lesson observations revealed that most of the students in Form 3E enjoyed writing their research reports and preparing the interview guide for the local MP, with minimum assistance from the teacher. In the 15 lessons observed, Emmy used learner-centered pedagogy characterized by individual and group presentations, discussions, debates, role play, pictures, text, and map study. Learners also wrote their own notes before, during, and after the lessons. Emmy's constructivist approach to history instruction seemed to be paying dividends as learners in Form 3E appeared to be succeeding in carrying out the research task with minimum scaffolding

and supervision from their teacher. But the implementation of Continuous Assessment Task 1, which Emmy (like all the other history teachers in this study) had not planned for in her schemes of work for Third Term 2017, presented unanticipated challenges. She reported that:

The tasks came midway through the term when the schemes of work were already done, so the tasks were not planned for. They took some of our lesson time. We were unable to complete work on the Second Chimurenga as some of the time was now dedicated to Continuous Assessment Task 1, which is now due. We wanted to finish the tasks before the end-of-year examinations because they are contributing 30% to the candidate's final examination mark at "O" level.

In implementing Continuous Assessment Task 1, Emmy proved that "those first in the field are also first in yields." She was the first teacher to work on the research tasks when some teachers (like Angela) were still in the rejection/denial stage of this reform initiative. Not surprisingly, all 49 students in Form 3E had completed the research task and handed in their completed projects for marking before Emmy's exit interview on the 9th of November 2017. She proudly stated: "My students are well ahead because the history task is done. I am almost through with the marking." For Emmy, PjBL was as an exciting and rewarding experience, despite her initial dislike of the innovation.

Cross-case analysis

A synthesis of the four case-by-case profiles led to the emergence of two cross-cutting themes which assist in explaining why PjBL was withdrawn from Zimbabwean secondary schools in March 2018, after only one school term of experimenting with this learner-centered reform. The two emerging themes are discussed below.

PjBL as a novel (but difficult) innovation

The four history teachers in this multiple-case study regarded the introduction of PjBL as the most conspicuous change in Zimbabwe's New Curriculum Framework 2015-2022. They pointed out that the strength of PjBL was that it introduced learners to the skills of the historian at an early age. The history research project was supposed to contribute 30% to the students' final mark in Ordinary Level History, and the remaining 70% was to come from summative examinations (ZIMSEC, 2017a, p. 1). However, except for Bessie, the other three teachers were not happy with how the research projects were introduced in schools. As shown in the intra-case analyses, the teachers felt that policy makers

had not adequately prepared them on how to guide learners in carrying out fieldwork and producing the final research write-up/artifact.

The technical term used for PjBL in Zimbabwe's New Curriculum Framework is "Continuous Assessment Tasks" (ZIMSEC, 2017b). Continuous Assessment Task 1 for Term 3 2017 required learners to: "Carry out an investigation on the appointment of local leadership showing challenges in their appointment and offer solutions to the challenges" (ZIMSEC, 2017a, p. 3). All the Form 3 (15- to 16-year-old) history students in Zimbabwe were to conduct empirical research on this topic. This was one outstanding infringement of the Buck Institute for Education's (2015) Gold Standard of PjBL because history teachers and students were not given the latitude to pursue research topics of their choice and interest. The policymakers in Zimbabwe used the one-size-fits-all approach in imposing one research topic on all the Form 3 (15- to 16-year-old) history students in Zimbabwe. The four teachers complained that they should have been given the freedom to develop research topics with their students, taking into consideration their different contexts, the resources they had in their schools, and the learners' unique cognitive abilities.

Negative attitudes towards PjBL

Another cross-cutting theme emerging from the case studies was a general dislike for PjBL, except for Bessie, who embraced the innovation from the beginning. Despite her self-confessed positive attitude to PjBL, Bessie's class was unable to complete the research task before the term came to an end in December 2017. She blamed policy and the students: "It might be that pupils have developed resentment; they ask: 'What are all these tasks for?' It's a burden to them..." Angela ruled out the tasks as "a total failure" and maintained her negative attitude towards PjBL. She felt that students copied the projects from one another, and data collection was not genuine.

David complained that the dissemination of the research tasks into schools was chaotic and teachers lacked official guidance on how to assist students in conducting authentic research projects. However, with his small class of 20 students, he was able to help them complete the projects before the start of end-of-year examinations. Emmy was unhappy with the lack of staff development before the tasks were rolled into schools. But her negative attitude towards PjBL gradually mellowed as she was willing to learn new practices. She made commendable efforts to ensure that the 49 students in her class completed the research projects before the start of internal examinations in mid-November 2017.

Discussion and Implications

It is evident from the Zimbabwean experiment on PjBL that the implementation and sustainability of this learner-centered pedagogy is not easy. If PjBL is introduced without adequate preparation, policy failure is likely to occur. Two of the three schools in the USA studied by Culclasure et al. (2019) had to discontinue PjBL after one year of implementation because they were not yet “ripe for PjBL” (p. 13). These two schools failed in their experiment on PjBL because they did not have an established tradition in learner-centered pedagogy. Culclasure et al. (2019) advise that schools that are ready for PjBL need to be identified and targeted first. Those that are not can be left out of the reform initiative until such a time when they are deemed to be ripe to experiment with PjBL. Potential pitfalls like societal, teacher, and learner resistance and the demands of summative examinations need to be addressed before PjBL can be introduced in schools.

Although he was one of the policymakers, Paul Mavima, Zimbabwe's then Minister of Primary and Secondary Education, joined the bandwagon of criticism against PjBL. He was recorded saying: “The tasks are too much a burden to both the students and the teachers because if a learner is doing 10 subjects, they are required to do at least one task per subject meaning its 10 tasks for the 10 subjects per term or simply 30 tasks per year” (Gwaze, 2018, p. 6). The minister (and his advisors) did not foresee this lack of feasibility because no pilot study had been carried out before the rolling out of the reforms into schools.

In their study of the new curriculum in Zimbabwe, Dube and Jita (2018, p. 909) discovered that: “If there is anything that has brought more pain, agony and friction between teachers and the school heads, parents and curriculum planners, it is the task-based assessment [PjBL], introduced in the new curriculum.” Participants' experiences from the four case studies in this article seem to concur with Jita and Dube's findings. All four teachers complained about the practical problems they experienced in implementing PjBL. This ranged from chaotic dissemination of the tasks into schools, coerced implementation, poor planning, cosmetic staff development, task overload, and learner fatigue.

Policymakers in Zimbabwe seem to have overlooked the potential challenges associated with the adoption of PjBL in schools; mainly because no feasibility studies were carried out before the large-scale dissemination of the reforms. The New Curriculum Review Symposium (NCRS) held in Harare in December 2017 recommended the “suspension” of PjBL “until such a time a viable model has been developed” (MOPSE, 2017b, p. 15). PjBL was officially withdrawn from

the new curriculum in March 2018 (Gwaze, 2018), although all schools had stopped working on the projects in mid-November 2017 when the end-of-year examinations started.

Conclusion

The participants' experiences with PjBL in the Zimbabwean experiment showed that, in the absence of proper planning and feasibility studies, policy failure becomes inevitable. This is because PjBL, like most other learner-centered pedagogies, is not easy to implement and sustain. Not only is reform policy failure a waste of time and resources, it makes teachers, students, parents, and other stakeholders skeptical about curriculum reform and its intentions, increasing the chances of failure at implementation level. The Zimbabwean experiment with PjBL reflected part of the anatomy of policy failure with learner-centered pedagogy. The lack of a common understanding of PjBL resulted in the four history teachers having heterogeneous experiences during policy implementation. Some made significant progress with their students, one did very little, while the other only covered the research projects superficially. It looks like the research tasks were never fully accepted by the user system. Faced with resistance from the various stakeholders, the policy reformers appeared to have little choice but to withdraw the research tasks, signifying one conspicuous policy failure with learner-centered pedagogy in Zimbabwe's New Curriculum Framework (2015-2022).

Suggestions for Future Research

The authors of this paper took up the challenge (posed by the Minister of Primary and Secondary Education) to develop a PjBL model that tries to overcome the challenges experienced by history teachers in the Zimbabwean experiment on project-based pedagogy. The proposed model provides for teacher consultation, in-servicing, and staff development before the reform is disseminated into schools. Once teachers' voices are factored in during policy planning, the pilot testing of the model can be carried out in a few carefully selected schools. The proposed model does not require students to go out of the school premises in search of data and participants; instead, they have to rely on Google searches, school libraries and laboratories, newspapers, and the school environment. During pilot-testing, the model can be tried out across the different subject areas offered in the secondary school curriculum. The proposed model is not cast in stone. It is open to deconstruction and reconstruction by reform implementation scholars, teachers, and the various stakeholders so that it represents their interests and visions. The proposed model is tabulated in Table 1 below.

| | | | | | |
|-----------------------|--|--|--|---|--|
| Stage | 1. Teacher in-servicing & pilot studies | 2. Basic research skills & draft proposal | 3. Data collection | 4. Findings | 5. Lessons from the project |
| Time | One year before implementation | 1st term Form 3 | 2nd term Form 3 | 3rd term Form 3 | 4th term Form 4 |
| Activities | Consultation Training Pilot testing | Introduction to research concepts Learners identify research problems | Google search Library search Newspapers Laboratory Community | Presentation of findings Discussions Guidance by teachers Rough drafts | Conclusions Suggestions Possible solutions Final write-up |
| Data Resources | Workshops In-service courses Pilot schools | In-serviced teachers Learners | Computers Library Newspapers Laboratories Community | Collected data Learners Teachers | Analyzed data Learners |

Table 1: Proposed Project-Based Learning Model for secondary schools

Future research can focus on improving this model and pilot-test it to assess feasibility before large-scale dissemination. These future studies can also examine the conditions in secondary schools that are likely to promote (or hinder) the adoption of PjBL. There is need to examine the barriers that hinder the sustainability of PjBL in both developed and developing countries. Understanding these obstacles can assist future reform initiatives to avoid the pitfalls of previous reforms that have made PjBL unpopular with teachers, students, school administrators, and parents. As advised by Culclasure et al. (2019), it is necessary to identify schools that are ready to implement PjBL in order to predict the likelihood of early adoption and increase the chances for sustainable implementation. The Zimbabwean experiment on PjBL shows that learner-centered pedagogy is easier to talk about than implement.

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