Mathematics students role in the construction of classroom pedagogy: Observed practical classroom dynamics from Zimbabwe

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ABSTRACT

This study is a survey research report on observed classroom methods, approaches and strategies employed by Mathematics teachers and students in selected senior secondary schools in Zimbabwe. The identification is that that teacher dominance is a negotiated product, which results from teachers and students exercising power on each other in the classroom. Classroom practice is possible where power is conceptualized as a productive enabling force that simultaneously constrains and enables human action. In theory various perspectives of classroom reality become a co-construction, which is a joint project by the teacher and students. This study surveyed Mathematics teachers and students in randomly selected schools. Participatory and action research methods (triangulation) were used. The literature reviewed, questionnaires administered and the interviews conducted enabled the researcher to produce this report. The conclusion that could be drawn from this study is that if classroom practice is viewed as a dialectical co-construction then students’ passivity must be recognized as their exercising of power on the teacher.

Key words: classroom research, teacher power, student power, co-construction, social studies, students

INTRODUCTION

The teacher is recognised as the most important change agent to the exclusion of students in the class. Whenever change is desirable in educational practice, interventionist programmes usually establish for teachers without due consideration of students. Improving the quality of teachers has been viewed as a prerequisite for quality teaching and learning worldwide. The role students’ play in curriculum implementation is viewed as inconsequential. However, students world wide, are rarely involved in any meaningful way in curriculum decision-making, even though they are central to the process of schooling. They are perceived as inconsequential in curriculum matters. This is self-evident in the work of classroom researchers (Boaduo et al, 2011 and 2012), who tend to focus exclusively on what the teacher does in class, rather than on what students also do to influence classroom practices. This observation is pertinent not to Zimbabwe in particular but other African countries as well and even worldwide where formal schooling is practised. From the 1980s when the Zimbabwe attained political independence, it found herself in the throes of curriculum reform. One aspect of this reform agenda had been attempts to have teachers adopt a learner-centred pedagogy. This move was necessitated by the perceived inadequacy of the quality of teaching and learning using the old teacher-centred approach. Expectedly, schools have lately witnessed an ‘invasion’ of their classrooms by
The researcher’s contention in this respect is that students worldwide make great input in classroom processes to the extent that they significantly influence the way the teacher carries out teaching tasks. At the centre of this argument is the question: Do both the teacher and students jointly construct the notion of classroom reality as a social construction? Doyle (1992: 509) suggests that “the study of teaching and curriculum must be grounded much more deeply than it has been in the events that teachers and students jointly construct in the classroom settings”. Giving orientation to this study, it can be stressed that the classroom reality known as “teacher-centeredness” is a co-construction involving both the teacher and the students. In other words both the teacher and the students should provide input to make a lesson successful. Such conceptualization of classroom practice is only possible where power is not viewed as a commodity of possession for exchange. The researcher’s intention for using the concept “reality” is on “various perceptions of reality” which actually makes this study conceptualized in its practical perspective. This research study report has two aspects: the theoretical and the empirical:

The first is the analysis of ‘power-as-sovereign’ conception which underpins studies on classroom dynamics (Boaduo, 2012; Popkewitz 2000, as cited in McEneaney 2002: 104); and offer an alternative analysis of power based on the ideas of Foucault. This alternative analysis portrays students as objects and subjects of power.

The second is based on the alternative analysis of power and advance an argument for viewing classroom reality as a co-construction.

The third is the outline of findings from an empirical case study, in which both latent and manifest ways students contribute to the construction of the classroom reality that has been referred to as ‘teacher-centeredness’ are examined.

The final part of the study is that the researcher offers a set of conclusions derived from secondary sources, collected primary data and the analysis.

Methodological choice and application

This study surveyed 90 schools (45 primary and 45 secondary) in the educational districts of Zimbabwe. The schools were chosen randomly (Ary, Jacobs and Razavieh, 1972; Gay, 1976; Nachmias and Nachmias, 1981; Smit, 1995; Hoinville, 1982; Babbie, 1986; Forceese, 1970; McMillan and Schumacher, 1993) to be able to attain a collective representation of schools to generalize the findings. However, the researcher paid attention to the location of the schools in urban and rural areas. Furthermore, some media reports have branded urban schools as rowdy and disrespect the authority of teachers (Sunday Times, 13th May 2007, p. 1). This study was guided by dual methods — namely participatory and action. The researcher fused the participatory and action research methods into what is termed triangulation, which is the application of using more than one method in a study. The participatory and action research strategies were used because the study involved the actors who constituted the bulk of classroom environment. Since the survey involved teachers and students, the two methods were ideal for the following reasons:

That research methods and techniques are task specific and the task is defined by the research goal. In this study, the goal was the exercise of power in the classroom between teachers and students.

That different studies use different methods and techniques because they have different aims and objectives. In this study our aim was to identify how teachers and students exercise power in the classroom.
That the method should be specific, relevant, applicable and appropriate for the task. In this study, the two methods chosen – participatory and action fit in this realm. That the chosen methods should apply to sample, sampling, data collection, interview, and questionnaire design. We considered this in the study.

The implication in this study is that participatory and action research methods complement each other for systematization of the data required to produce the study report, which should evoke participation and action on the part of the reader to be empowered to respond to the study report accordingly (Boaduo, 2010; Boaduo et al, 2011; de Vos et al, 2005; Bryman, 2004; Participatory Research, 1994).

**Research instruments for data gathering**

In the collection of the required primary data for the study, the observation, questionnaire and interview were selected as data collection instruments. In order to ensure that the data collected were measurable, easy to score and analyse, the use of questionnaires was principal. These questionnaires were designed using the Likert Scale format and covered all the areas of importance pertaining to classroom practice. For making the questionnaire easy to complete and to increase the percentage of accuracy, reliability and validity in the findings, the researcher included questions that required specific information from the respondents, which made it easy to collect the most relevant data (de Vos, 2005). The questionnaires were administered by hand to the sampled teachers and students of the randomly selected participating schools. The collected questionnaires were tabulated according to respondents’ responses and put into tables and graphs using the SPSS and NVivo statistical programme and excel.

Close-ended questionnaires were administered and open-ended questions were used to conduct the interview. The main reason for the interviews was to sift further information directly from the respondents to be able to compare them with the responses from the questionnaire. Generally, in most parts of Africa development is biased towards urban areas, with the rural areas lagging behind. In general, schools in urban areas are well resourced and staffed while those in the rural areas are under-resourced and understaffed making the disparity between urban and rural schools evident. Relative poverty is another characteristic feature of the rural population.

**Data collection**

In the selected 90 schools, the researcher observed 10 class periods per school (a combined 675 observation hours = 90 schools x 10 observation periods x 45 minutes per period ÷ 60). The observations were unstructured and were aimed at providing a textured portrait of life in the Mathematics classroom to obtain data to substantiate those from the questionnaire. Record was kept of such features of the classrooms as control measures, student-teacher and student-student interactions, as well as non-verbal modes of communication. In these classroom observations, the researcher assumed the position of a semi-participant observer. After each observation, the researcher undertook individual interviews with ten of the 20 teachers and 5 each of forms three, four and five students (ten girls and ten boys), each interview for teachers lasting between 15 and 30 minutes and that of students lasting between 10 to 20 minutes. The sampled population totalled 1200 teachers and 1200 students making a combined 2 400 respondents. Both sets of interviews were semi-structured and covered general areas such as pedagogy, schooling and its goals, classroom organization, and student-teacher relationships. The ultimate objective of the interviews was to establish how the teachers and the students made sense of their own classroom actions. The classroom observations were carried out before the interviews were conducted in order to facilitate the generation of interview questions from the observation data. Analysis of the data involved repeated reading with the aim of identifying recurring themes that could be used as the organizing themes in the data presentation and discussion. Three such themes were identified namely students’ expectations, students’ silence and teacher’s deficit view of students.

**RESULTS**

Revelations from observed classroom dynamics and the administered questionnaire and interview schedules have been briefly summarised under subheadings that follow:

**Observed classroom dynamics**

The findings of the study confirmed the findings of a study by Tabulawa (1998) on classroom dynamics that teachers play a ‘dominant’ role in the classroom, with teaching and learning being primarily based on information transmission by the teacher. Tabulawa further reported that elsewhere teachers employed strategies that ensured sustenance of their dominance. For example, teachers ignored what they considered to be students’ incorrect answers (conversely, they emphasized ‘right’ answers). Mass teaching was the norm and teachers asked closed-ended questions. All these techniques ensured the maintenance of the
teacher's dominance in class which has led to the description of lessons as “teacher-centred or dominated.” Conventionally, the interpretation of such findings tends to portray the teacher as the embodiment of the oppressive structures. The teacher has been presented as the one who possessed power and used it for purposes of social control. The students have been considered as passive and powerless. The implicit view of power here is that of power-as-sovereign. However, in this study, teacher dominance was not necessarily seen as a product of the teacher’s inherent desire for social control but as a responsibility to adhere to professional protocol.

Interviews and Observation data congruency

The interviews and observation data showed that in many instances teachers were ‘forced’ into the dominant position by the students themselves (Atkinson, 2004; Bryman et al, 2001; Bryman, 2004; Rampton et al, 2002; Banks, 2001; Charmaz, 2000, 2002 and 2004). Teacher dominance is not teacher imposition. It is a negotiated product resulting from students and teachers exercising power within the limits of the constraints set by their contexts on each other. In other words, students do contribute towards the classroom reality called teacher-centeredness.

The question, therefore, is “How was this accomplished?” What follows is a brief attempt to answer this question.

Students’ role in the construction of teacher dominance in the classroom

It was observed in the classrooms by the researcher that students role in the construction of teacher dominance in the classroom results from students expectations and behaviour as is evident in the following subsections.

Students’ expectations of the teacher and fellow students’ behaviour

Students have certain expectations of both their teachers' and fellow students' behaviour in the classroom. These expectations regulate the participants' classroom behaviour. In particular, the expectations position students as gatekeepers to the teacher’s reputation. From the interviews with the 60 teachers it was clear that they were aware of this powerful position of students. The 60 students selected for the interview, however, were not as conscious of the power of their own position as the teachers were. Nevertheless, they had certain expectations of teacher behaviour. It was these expectations, which the teachers were fully aware of, that influenced how they conducted their lessons. Whether the students described the teacher as ‘good’ or ‘poor’ depended, on how well the teacher carried out responsibilities that essentially had to do with imparting school knowledge (and not deviating from that role). Characteristically, students’ expectations and comments on their Mathematics teachers in a summary provided below:

“A competent teacher usually comes to classroom punctually, prepared and has a good mastery of subject content and ability to deliver the lesson in such a way that students will understand and make their contribution. It must be clear that he knows what he is talking about. Whenever we get a new teacher, we ‘test’ him to find out if he knows his stuff. Depending on how he or she impresses us we either call him or her the ‘deep’ one or the ‘shallow’ one. Notes are very important to us. We cannot pass our tests and examinations if we do not have notes for revision. Some teachers just give you what is in the textbook. A good teacher must prepare and give detailed notes. Yes, we can make our own notes but ... we don’t have time. I like a teacher who satisfactorily answers students’ questions. Some teachers have this habit of ignoring questions by students or ridiculing students who ask questions they themselves feel are stupid. A good teacher keeps order in class and makes you do your work. You see there are students who always want to challenge the teacher by making noise. The teacher must be able to control those. Homework must be checked by the teacher.”

Metaphorically, students view their teacher as a fountain of knowledge. If teachers were perceived in this way, then probably the most important thing for students was how effectively the teachers transmitted that essential commodity, knowledge and skills, and it was their ability to do so that determined their being good. A teacher who did not live up to these expectations was labelled as ‘an incompetent’ teacher. In a summary students felt that an incompetent teacher displayed the following qualities:

“This is the teacher who gives notes without explaining them clearly or does not give notes at all. We have protested against such teachers before by reporting them to our class teacher. Some teachers, particularly female teachers, like teaching while seated on their front chairs. They also often speak very slowly. We do not respect such teachers. When students feel that, the teacher is not watching them they tend to play. When the teacher is a slow speaker, we doze off. It is like the teacher is not confident about what he or she is doing. Some teachers
have the tendency to come late to class and do not mark homework and tests on time. As a student, you need to know how you are performing. However, some teachers take too long to give us feedback on our work and we often wonder if these are not the lazy ones. The label of incompetence was one that every teacher dreaded, and all of them confessed that in their teaching they consciously and deliberately attempted to avoid it.

A summary of selected sample interview responses from teachers

Teacher 1: I make sure that I am prepared when I go for my lessons, and if I am not prepared, I tell the students so.

Teacher 2: Every time I am in class I avoid habits that would make me appear as incompetent. Habits like not being well prepared. I collect their notebooks and check if they write notes, and I give exercises at the end of the lesson.

Teacher 3: I make sure that I have my facts right. I try to mark their work on time and give them the feedback on time. I make sure that I am familiar and conversant with my material.

The teachers took all these measures to appear ‘effective’ and ‘efficient’ in the eyes of their students’. In the comments above, teachers emphasized mastery of subject matter and preparedness. Generally, these are qualities expected of any teacher anywhere. However, how teachers demonstrate possession of these qualities will differ, depending on the context. The teachers observed were aware that they had to demonstrate visible possession of these qualities by assuming an information-giving position. This would ensure that they effectively executed their mandate of imparting knowledge and skills or ‘delivering the goods’ to the students. Efficient transmission of information to students formed the cornerstone of almost all lessons observed in the schools. Not all the teachers would have liked to approach their lessons in this fashion; however, all were aware of the dangers of deviating from the norm.

Adhering to the ‘norm’, in Foucault’s view, has the effect of disciplining human subjects – termed as normalization of correct behaviour. Through normalization, students and teachers internalize norms and rules that ensure consistency in their behaviour. Deviation from what is considered ‘normal’ is punishable, whereas adherence to the ‘norm’ is rewarded. One effect of normalization is self-regulation. To Anderson and Grinberg (1998:335) self-regulation is “achieved through discourse practices that provide validation for behaviour”. Being described as a ‘good and competent’ teacher is normalizing in that the label tells the teacher what kind of behaviour is rewarded. On the other hand, being called incompetent tells the teacher what kind of behaviour is unacceptable. The fact that the students are the “primary source of the teacher’s reputation among colleagues, administrators, and in the community, as well as among [other] students” ensures that the teacher is continually under a disciplinary-normalizing gaze, a kind of surveillance that makes unnecessary constant reminding about the ‘proper’ way of behaving (Schlechty and Atwood 1977:286).

The teachers, therefore, self-regulate their own behaviour. The ‘social order’ of the classroom characterized by asymmetrical power relations between the teacher and students is reaffirmed and reproduced. Students, too, are under a normalizing and controlling gaze, not from the teacher as such, but from themselves. Explicitly, these relations are multi-directional not unidirectional. In other words, there is no imposition; as Butin (2001:168) puts it,

a “good student . . . is not simply made. Nor is a teacher simply the “authority” in control”. Butin contends that these identities are not simply inscribed upon these classroom participants: rather “the individual does this to herself, one might say under duress, one might argue unwittingly, one might confess with scant choice, but it is not something done to her; it is something done with her”. The point is that both the teacher and the student are involved in their own subjectification.

Emerging results from the above analysis

One strand that clearly emerges from the above analysis is that of the image of an ‘effective’ teacher as a particular cultural construction. It is possible to subject this image of the ‘effective-competent’ teacher to some kind of ‘archaeological’ investigation to establish the socio-historical conditions that permitted its development. Tabulawa (1997) suggests that the teacher-dominated environment reported in classroom research in Botswana can partially be attributed to the discourse of human resource development that emerged with the country’s independence in 1966.

In Zimbabwe the exploitation of diamond, in the Chiayadzwa area in Manicaland Province encouraged the expansion of the country’s economic base, with a consequent growth in jobs in the public-formal sector. However, access to those jobs depended on whether one possessed the requisite academic credentials. Formal education, therefore, became an important means of distributing life chances. With so high a premium placed on formal education, examinations became a very powerful selection mechanism. Intensification of
examining could only lead to a concomitant intensification of the demand for education and certification. In this event, the utilitarian view of education; that is the view that education is an important vehicle for social mobility; emerged.

In Zimbabwe, one effect of this was a rupture between the twin processes of teaching and learning, which emerged as distinct but inextricably related activities with one becoming meaningless without the other. Not only does this teach-learn converse place the teacher in a very powerful position, “it also serves to demarcate role boundaries between the teacher and the students, the teacher teaches and the students learn” (Tabulawa 1997:201). Thus whether one is an ‘effective’ teacher becomes a function of how well one carries out those activities associated with teaching.

Furthermore, the teach-learn rupture leads to the view of school knowledge as a commodity out of the students’ reach because the teacher’s duty is seen in terms of executing prescribed subject matter. Their work is cast in terms of “optimizing efficient performances” (Pignatelli 1993: 419). Teachers then become mere technicians who “pass along a body of un-problematized traditional facts” (Kincheloe 1997: xxix). The teachers’ effectiveness is then judged by how well they transmit the ready-made knowledge. However, by their very nature, “technicist practices sustain and exacerbate asymmetrical relations of power in the schools” and by extension, in the classroom (Pignatelli 1993: 422).

**How does student’s silence play a role?**

Students construct classroom practice through ‘silence’. Students’ ‘refusal’ to participate in classroom activity is interpreted in several ways. For some, it is idiosyncratic student behaviour, a sign of laziness. It is considered as deviant behaviour. This interpretation is shallow and prejudiced. At a more sophisticated level, student silence is explained in terms of students’ lack of ‘voice’, which is associated with powerlessness. The weakness of this interpretation is that it is anchored on the monopolarchal conception of power, a conception of power that positions students as hostages in classroom practices. The view of power as relational yields a radically different interpretation of students’ silence. In this view of power, students’ silence is not a manifestation of powerlessness or lack of voice. It is the ‘active’ exercising of power and construction of classroom practice.

Silence is an important means of communication in some cultures (Boaduo, 2011d). Goldberger (1996: 343) urges researchers not to dismiss silence as lack of power, but rather to search for what lies “underneath silence”. If researchers were to follow Goldberger’s advice, they would, as the English novelist George Eliot imagines, “die of that roar which lies on the other side of silence” (cited in Belenky et al. 1986:3). In other words, researchers need to theorize silence and find tangible evidence to support the theory of silence among students.

To Hurtado (1996:382)

“Silence is a powerful weapon when it can be controlled. It is akin to camouflaging oneself when at war in an open field; playing rupture at strategic times causes the power of the silent one to be underestimated”. The second sentence in this quotation clearly captures the general stance adopted towards silence in classroom research. This is what appears to be happening with student silence in the episodes below.

**Episodes of silence in the classroom by students**

**Episode 1**: The teacher walks into a form three Mathematics class and introduces his lesson by the usual way of the question-and-answer sequence:

**Teacher**: What is the sum of angles in a triangle? (There was silence in class. There was no answer. He repeats the question but still there was no answer)

**Teacher**: I will rephrase the question. What do we get when we add the three angles in any given triangle? (Still there was no response)

**Teacher** (Looking disappointed): I am sure that you know the answer. Expressing yourselves in the medium of instruction is the problem.

The teacher continued for almost three minutes asking the same question and trying to give students clues to the answer. In so doing, a ‘stand-off’ developed between the teacher and the students. Students were resisting the teacher’s attempt to move them into his own world of meaning. Realizing that students were not ‘willing’ to answer the questions, the teacher wanted to prove his worth and remarked,

“Well, I will do the talking since in the afternoons students are too tired to answer questions”.

The teacher then abandoned the question-and-answer session and started lecturing on the topic. While he was ‘lecturing’, the students listened attentively and caused no disruptions to the flow of information. Thus, the students succeeded in moving the teacher into their own frame of reference. Perhaps the attentiveness was possible because the students’ game of rupture was yielding the desired results.
In the described episode one above, the teacher seemed to have finished with the lesson and suddenly a hand shot up.

**Teacher:** Yes, what is it?

**Student:** Can I ask a question and make some comments?

**Teacher:** Why not, I am happy that you are participating at last.

**Student:** Sir, don't you think you are doing our thinking for us? Don't you remember that if we cut the corners of a triangular object and put the corners close to each other we get a straight edge?

**Teacher:** Of course, yes. But why did you refuse to answer my questions?

**Student:** We want to let you know that we're old enough to contribute towards lessons. You should have given us homework to go and research on the topic so that we could contribute during the delivery of the lesson.

**Teacher:** I have to thank you for this revelation. However, your silence made me feel you were tired because it is a very hot afternoon.

**Student:** No, I don't think that is the case. We want discussion where we can make input to the lesson. We suggest next time you don't underestimate our power of control in the classroom during lesson delivery.

**Teacher:** (Smiling and clapping): Thank you for your excellent contribution. I think you've made me a better teacher now. (All the students clapped their hands hugging nearby colleagues).

This is evident that under certain conditions, students can bring teachers to attention and remind them that they are part of the teaching business and can contribute immensely to making teaching in the classroom successful.

**Introspection discussion with teachers**

After the lesson, the researcher followed the teacher to the staff room and requested to discuss with him the incidence during the lesson. The researcher asked if he has learned anything from what the students did. His answer was this:

**Teacher:** “Yes, I've learned a lot and hope to involve them always, especially telling them the topic of a lesson in advance for them to research and keep some notes that they can provide for discussion in class”.

**Episode 2:** Another teacher in form four classroom organized students for a group discussion on ‘The importance of the economy of Zimbabwe’. The discussions were to be carried out in English. The majority of the students were observed doing nothing related to the task. In another lesson, the same teacher asked students to discuss in groups the role mathematics plays in the construction of hydroelectric power stations to produce electricity as a source of energy. Only eight students (four pairs) out of 24 were found working. The rest were either doing nothing or reading the class textbook.

**Researchers’ comments:** "In both episodes students appeared to be 'refusing' to participate in certain classroom activities. This is what one teacher had to say in connection with the students’ behaviour:

**Teacher:** Even if you give them group-work, they are not motivated to do it. Only one or two students will do the work. In this way you find yourself compelled to lecture at them if they are to gain any school knowledge”.

The way these students seem to express their refusal is through silence. How then do we explain the phenomenon of students’ silence?

**Power: A force to reckon in the teaching-learning environment**

In this context, the post-structural feminists’ attempt to demonstrate the gendered nature of classroom practice is used as illustration (Belenky *et al.* 1986, Orner 1992, Maher and Tetreault 1994, Goldberger 1996, St. Pierre 2000). These feminists, following Foucault, understand power as a dialectical force. This understanding predisposes them to adopt a contrary stance towards modernist dichotomies such as powerful or powerless, voice or silence, man or woman, subjectivity or objectivity, and many others, preferring instead to see these categories as being in a dialectical relationship, as being relational. Seen in this way, one category is not privileged over the other.

Post-structural feminists would, for example, deconstruct the voice or silence dichotomy so that the two end up, not as opposites, but as ‘definitionally interdependent’ (Anyon 1994: 119). They would argue that as voice constructs knowledge, so too, does silence, in that silence is resistance. It is the exercising of power, and thus the construction of knowledge (Goldberger 1996). In other words, silence is voice; it is power. Thus, the students in the episodes above were exercising their power when they refused to participate - by keeping quiet - when their teachers wanted them to participate. In the process they actively constructed classroom practice, as indicated by one teacher’s remark that when students “refuse to participate you find yourself compelled to lecture at them if they are to gain any school knowledge”.

The question that requires answer is “Why did the students ‘choose’ to exercise their power through silence?” Maher and Tetreault’s (1994) observation is
they see themselves as capable of doing so; hence theiresistance, is an act. It may neither be helpful nor life-

Likewise, even the acceptance of the imposition, the lackof resistance against their teacher's moves. Butin

Age, as a positionality factor is pertinent to theunderstanding of students’ silence in the lesson episodesillustrated above. Such is the importance of age inShona, Ndebele and TshiVenda society that ‘any seniorof the same sex is one’s superior and any junior of thesame sex one’s subordinate’ (Alverson 1978:13). In thehome culture of children in the Ghana among the Asanteethnic group, and in many other African cultural settings,children do not talk back to and do not question thewisdom of elders (Boaduo, 2011d). This is tied to theAfrican cosmology which is based on the premise thatthere is a direct relationship between age and knowledge(the older a person, the greater that person’s depth ofknowledge and wisdom). This structures the child-elderrelationship in hierarchical terms (Boaduo, 2011d). Children internalize these power relations and carry themto the classroom as cultural medical prescription to bedispensed for diagnoses.

In the episodes illustrated above, students wererequired to participate in activities aimed at knowledgeconstruction. Insofar as the students understand theirroles, it is not their duty to construct knowledge, nor dothey see themselves as capable of doing so; hence theirresistance against their teacher’s moves. Butin(2001:168) notes that:

“Resistance may take the form of running away orstanding still, of saying no or not saying anything at all.Likewise, even the acceptance of the imposition, the lackof resistance, is an act. It may neither be helpful nor life-sustaining, but it is nevertheless an action within relationsof power”.

Henry (1996:377) observed, “That refusal to participate isa kind of oppositional stance”. It is an action embedded inthe classroom relations of power, and has an effect on

how the lesson progresses. Student passivity, so muchreported in classroom research, is therefore, an illusion ofminimal proportion.

Related summary of Foucaultian view of Power andPower Relations

Orner (1992: 82) recommends that researchers abandonwhat she terms the ‘monarchical conception of power’. This is the conception of power as a commodity, as‘property’ possessed by individuals or groups ofindividuals, which can be acquired or seized. Forexample, it is often taken for granted that teacherspossess power and that students lack it. Talk about’student empowerment’, e.g. through a learner-centredpedagogy, often implies teachers giving some of theirpower to students. This view of power as property to beexchanged inevitably leads to the ‘identification of powerwith repression’ and to a definition of power as primarilya negative force, that serves the interests of domination(Cousins and Hussein 1984: 230). Aronowitz and Giroux(1985: 154) have characterized this perspective of poweras follows:

“Treated as an instance of negation, power becomes acontaminating force that leaves the imprint of dominationor powerlessness on whatever it touches. Thus, socialcontrol becomes synonymous with the exercise of dominationinschools . . .”

McEneaney (2002) observed that this conception ofpower implicitly informs much educational research. Inclassroom research, such a conception has led to theunderstanding of classroom power relations in terms ofdominators (teachers) and the dominated (students);teachers possess power and use it to dominate students;hence the description of students as passive actors in theclassroom.

Studies that describe classroom practice in Zimbabweas ‘teacher-centred’ or ‘teacher-dominated’ are informedby this monarchical conception of power. Teaching ischaracterized by gaps, ruptures, and contradictionsoccasioned by the interactions between teacher andstudents (Orner 1992). This means that the students areactive agents who exercise power to produce classroompractice. Nevertheless, this is not conceivable under the‘monarchical conception of power’ paradigm. Analternative conceptualization of power that is one thatrecognizes students as active agents is necessary.

Foucault’s (1980: 89-98) analysis of power is instructivein this regard. His view is that: “...power cannot be a commodity. It is neither given, nor exchanged, norrecovered, but rather exercised, and . . . only exists inaction’. Once people interact in relationships, power

comes into existence. That is, power is a productive social dynamic. In Foucault’s view, it is not power that differentiates between those who possess it (e.g. teachers) and those ‘who do not have it and submit to it [e.g. students].’ Rather power must be analysed as something, which circulates, or as something, which only functions in the form of a chain. In other words, individuals are the vehicles of power, not its points of application.

According to Foucault (1982:220-222) a power relationship has two features. It requires that the person over whom power is exercised “be thoroughly recognized and maintained to the very end as a person who acts”, and that, “faced with a relationship of power, a whole field of responses, reactions, results, and possible inventions may open up”.

In other words a power relationship is open-ended if the exercise of power becomes a way in which certain actions may structure the field of other possible actions. An important element of any power relationship is freedom. Where action is completely constrained, one may not talk of there being a relationship of power. To Foucault power is exercised only over free subjects, and only insofar as they are free. In other words, the person over whom power is being exercised (e.g. the student) is also simultaneously a person who acts, and whose actions in the process transform the one exercising power.

Dreyfus and Rabinow (1982: 186) indicate that, ‘power is exercised upon the dominant as well as on the dominated’ which means that the exercising of power is never unidirectional. According to Kincheloe (1997: xxvi) Power is not the province of one group and not the other; rather it is seen as a productive force. The implication is the capacity to act and summarized thus:

“If power is not a unitary force with unitary effects or unidirectional hierarchy, then we can be alert to different ways oppressed people elude control. If we are all empowered by our particular capacities and skills and we are all un-empowered by our inability either to satisfy our wants and needs or express our living spirit, we begin to understand that power is exercised by both dominant and subordinate forces”.

Thus, in the classroom, the teacher exercises power over students and the student also exercise power over the teacher. Oppression elicits resistance, and this may be manifest or latent. Far from being an imposition by the teacher, classroom reality is negotiated (Delamont 1976) and, as such, it is a dynamic process in that it is constantly defined and redefined. Inasmuch as teachers employ certain strategies to influence students’ learning, students also devise, consciously or subconsciously, strategies to influence the teacher’s classroom behaviour.

It is important to indicate that a new class is not a clean slate passively waiting for the teacher to inscribe his will on it. It is an ongoing social system with very definite expectations about appropriate teacher behaviour. If these are not confirmed the students will protest and the renegotiated patterns of behaviour may not prove to be, just what the teacher intended (Nash 1976). Riseborough supports this observation (1985: 209-214) who states that pupils can be overt curriculum and hidden curriculum decision makers and adds that:

“[T]he lesson does not simply belong to the teacher, children can and do make it their own. They put so much on the agenda of the lesson, to a point where they are the curriculum decision-makers. They make a major contribution to the social construction of classroom knowledge. Children actively select, organize and evaluate knowledge in schools”.

Similarly, Doyle (1983: 185) cites a study in which Davis and McKnight (1976) reported “[meeting] with strong resistance from high school students when they attempted to shift information-processing demands in a mathematics class from routine or procedural tasks to understanding tasks. The students refused to co-operate and argued that they had a right to be told what to do”.

Researches, which portray teachers as dominators of the classroom and students as mere pawns, are flawed because they fail to capture the complexity of the ways power works both on and through people (Boaduo and Gumbi, 2010). The description of classroom practice as ‘teacher-centred or dominated’ requires problematization. Often it creates the impression that students have not contributed in the construction of that reality. This is misleading, for the reality called ‘teacher-centeredness’ is itself a co-construction. There is a sense in which students are involved in the construction of their own domination. The appreciation of classroom practice as a dialectical co-construction assumes a pivotal position in understanding classroom dynamics. How, then, is this co-construction to be understood?

Analysis of perceptions of classroom reality as co-construction

The classroom environment as an arena for human activity has an inherent structure (Boaduo, 2010). To make classroom social interaction possible and successful both teachers and students construct this structure (Doyle, 1992). Using the twin concepts background and foreground developed by Berger and


Kellner (1965) to explicate the dialectic of the classroom as a co-construction; it is worthwhile to indicate that human life requires a stable background of routinized meanings. This background according to Berger and Kellner (1965: 112) “…permits spontaneous barely reflective, almost automatic actions”. Life would be unbearable if it did not have a background of routinized activities, the meaning of which is taken for granted. This background becomes a reference point for future actions and practices. The classroom, as an arena for human activity, requires a background of routinized practices. Without that background there cannot be stability, and by extension, no teaching and learning (Boaduo, 2011, a, b and c).

Both the teacher and students know very well that stability is essential if learning is to take place; but because social stability is never a biological provision, they have to ‘construct’ it. This requires the fullest cooperation of both parties in order to make this ‘co-construction’ successful and productive and its application practicable and effective in the classroom dialogue between the teacher and the students.

Generally, co-construction can be accomplished by means of developing common-sense images of the nature of teaching and learning. Such images and their accompanying roles are then routinized and come to constitute the classroom background. However, if human life only had a background, society would be static, because by its very nature the background constrains action. Social actors would then be reduced to ‘choiceless’ actors who are at the mercy of the overly oppressive social structure. As Giroux (1980: 234) observes that the view of human action “seals off the possibility for educational and social change”. In the absence of positive co-construction where teacher dominance is exercised over students confrontation is the only possible manifestation.

From this analysis, therefore, it becomes imminent that the coming-into-being of the background automatically “opens up a foreground for deliberation and innovation” which permits “deliberate, reflective, purposeful actions” (Berger and Kellner 1965:112; Berger and Luckmann 1967:71). Thus, the existence of the foreground ensures that the background does not become a determining instrumentality but becomes a structure that mediates human action.

Introspectively, the dialectical relationship of the background and foreground ensures the possibility of reflexive human action; because it guarantees ‘freedom’ of acting agents, the foreground opens up a whole field of power relations. It is here where meaning is negotiated and renegotiated by the actors. In the processes of negotiation and renegotiation a “…definition of the sit

uation’ emerges. Thus, classroom social interaction can be viewed as negotiated between participants (the teacher and students) on the basis of a mutual agreement to sustain a particular definition of the situation (Jones 1997: 561). Because it has both a background and foreground, the classroom situation is at once stable and unstable. The stability occasioned by the classroom’s background permits the reproduction of practices, while the foreground permits their production. In this sense, the classroom situation is simultaneously a constraining and an enabling field; which permits common participation (engendered by the existence of an agreed-upon ‘definition of the situation’). At the same time it allows for tensions, contradictions, and contests. In other words, teacher and students classroom practices are neither completely constrained nor completely free. Viewed from this perspective, the classroom becomes a dynamic system in which the teacher and students are not ‘pawns’ but are instead active agents operating within contextual constraints. In this situation of relative freedom, the teacher and students exercise power on one another, leading to the co-construction of classroom reality.

The strength of the idea of classroom practice as co-construction lies in its difference from the views expressed by theorists such as Anyon (1980) who sees classroom practice as mechanistically determined by wider structural and economic forces and rejects the phenomenological view of a structurally unconstrained agent. What remains, therefore, is the view expressed by Freire (1985: 69) that “…praxis is only possible where the objective-subjective dialectic is maintained”.

The relevance of this empirical study to Mathematics as school subject

The broader question that the study seeks to answer is: How do Mathematics students contribute towards the construction of classroom reality?” Three specific questions are considered in an attempt to answer the broader question:

In what ways do Mathematics students in senior secondary schools in Zimbabwe or elsewhere influence their teachers’ classroom practice?

What shape is the resultant classroom reality?

What are the implications of this influence for pedagogical change?

The basic premises of the empirical study are that power and power relations are central to an understanding of
classroom practice, and that students are capable of exercising power in the classroom. They are co-constructors of classroom practice. The study, therefore, concerns itself with establishing the manifest and subtle strategies that students employ in action and the role of power and power relations in shaping those strategies. These strategies are under researched. As a result the researcher does not have a clear understanding of how much of an impediment students may be to efforts to alter the teacher’s classroom practices. This study, therefore is an attempt to offer an advance towards such understanding.

**Teachers’ deficit view of students’ power in the classroom**

Secondary school teachers the research has worked with during practical teaching supervision and observation held a deficit view of their students. The view was linked to the perceived students’ deficient social, cultural, and economic background. Two factors related to students’ backgrounds contributed to this perception. These were:

The students’ poor mastery of English the medium of instruction and their rural background (especially who live and school in the rural areas).

These factors were linked to each other in a causal relationship - poor mastery of the English language, the medium of instruction in the Zimbabwe secondary schools, was attributed to the students’ rural background. The researcher observed that students were not eager to respond to questions posed by their teachers, nor were they prepared to participate in group activities organized by their teachers. Although the teachers interpreted this behaviour as ‘unwillingness to participate’, they acknowledged at the same time that students’ poor self-expression hindered them from fully participating in planned activities. The researcher further observed on several occasions students struggling to express themselves in the medium used for instruction. This deficiency was linked to their rural background, a background, it was believed, that did not include learning resources such as television and libraries that students could use to improve their oral English language skills. This deficiency was not envisaged with students in the urban schools. It was the direct opposite.

The teachers said: “If you compare these two groups of students (i.e. urban and rural) as far as class participation is concerned, you will find that students from urban schools participate more. They talk and ask questions. Students from rural areas are really dull, and reserved. No matter how hard you try to motivate them they just remain lifeless in class. All they want is information from you. They are not confident. They do not believe in themselves. They do not believe that they are capable of knowing anything that does not come from the teacher or the textbook”.

The teachers thought that interactive methods of teaching such as those associated with learner-centred pedagogy were more suited to students in urban areas and that directive or transmission teaching was appropriate for the students they were teaching as explained by a teacher:

“We try some of these new methods of teaching. Say you give them a textbook and a topic and ask them to sit in groups and discuss. At the end of the lesson you realize that they haven’t done anything because they believe that the teacher should impart the knowledge to them”.

What should simply be seen as ‘differences’ between urban and rural students is turned into ‘deficits’ on the part of the latter. The deficit view becomes the basis for comparing these groups of students and for constituting their identities - as ‘dull’ or ‘brilliant’. In the classroom, these deficiencies translate into information that helps structure events. One effect of the deficit view is that it invariably calls for more control from the teacher, thus exacerbating the already prevailing asymmetrical power relations in the classroom. Given the perceived students’ deficiencies, it is not surprising that teachers viewed their own responsibility in therapeutic terms as one teacher commented:

*My duty is to mould students into responsible citizens. ‘The teacher’s role is to impart knowledge to the students. Because they do not participate in class activities I am compelled to spoon-feed them.’*

Just like the doctor, the teachers viewed themselves as charged with the responsibility for restoring to health those they were in charge of (the students). In the lessons observed, this visibility was heightened by the oblong-shaped classroom architecture and the arrangement of desks in rows and columns, which ensured unobstructed movement of the teacher in the classroom. This ensured that students were under constant surveillance. What sense did teachers make of this desk arrangement? A teacher commented thus:

“I always feel psychologically in control of the class when they are all facing me, and again I can also detect instances of playfulness in class when they are all seated facing me. It becomes easier to bring order in class in the sense that you are able to see who among your students is not listening attentively, who is falling asleep, or is...
doing something else different from what the whole class is doing. However, the surveillance did not always require the teacher’s physical enforcement.”

From the above comments, it appeared that students themselves had internalized the need for surveillance. Teachers should ensure their visibility, both physically and vocally. However, it is worth noting that this is not always the result of the teacher’s orchestration. The teacher’s ‘physical’ and ‘vocal’ presence is a demand from the students themselves. Covertly, however, the teacher visibility becomes a control mechanism that inadvertently sustains asymmetrical power relations in the classroom, leading to both the production and reproduction of teacher dominance. Not only had the students internalized the need for surveillance, they had also internalized their own perceived deficit status, thus reinforcing the teacher’s image as therapist. Such internalization ensured that the students took “responsibility for behaving appropriately without the look of the teacher” (Gore 1994:116). This was achieved through students turning in “upon themselves, creating reinforcing gazes among themselves” (Anderson and Grinberg 1998:336).

In the classroom, this self-regulation is achieved through measures such as peer pressure. In the classes the researcher observed, the students’ awareness of their classmates had a profound effect on whether they participated in class activities or not.

Most students interviewed acknowledged that quite often they were inhibited from answering questions from the teacher for fear of being laughed at in case they gave a wrong answer or failed to express themselves well in English. In addition, students disliked fellow students who engaged the teacher in debates and arguments over subject content. Such students were seen as delaying progress and were often accused of posturing to win the teacher’s favour, or even pretending to know more than the teacher. This was interpreted as unwarranted questioning of the teacher’s authority. Given such an environment, many students withdrew into the safe cocoon of silence. The effect of this withdrawal is clear; the teacher is left to play the dominant role in the classroom processes.

The analysis of teacher dominance advanced suggests that the teacher is not entrusted with absolute power that is exercised over students. Rather, the teacher’s encounter with students in the classroom engenders relations of power in which both the teacher and students are caught an indication that “…this machine (i.e. the classroom) is one in which everyone is caught, those who exercise power as well as those who are subjected to it” (Foucault, 1977: 156). In the process of this interaction classroom practice is constructed. The constructed reality thus constitutes a shared field of a mutually agreed-upon “definition of the situation” (Jones 1997: 561). While this field permits the participants actions, at the same time it limits and regulates the diversity of possible and permissible actions.

CONCLUSION

Research on teaching in Zimbabwe has characterized classroom reality as teacher-centred or teacher-dominated, but deeply embedded in this discourse of teacher-centredness are two assumptions: first that it is the teacher who possesses power to influence classroom practices, and second, that students are powerless, passive spectators in the production of classroom reality. These assumptions are predicated upon the conception of power as a commodity that can be exchanged, traded, transferred, and withheld. It is almost impossible where such a view of power is held, to conceive of classroom reality as a co-construction, involving both the teacher and students. However, once researchers adopt the view of power as a productive force they come to appreciate that students are active agents that influence their teachers’ classroom practices. Far from being an imposition from above, the teacher’s apparent dominance is a negotiated product resulting from the teacher and students exercising power on one another. The resultant shared, taken-for-granted classroom reality termed ‘teacher-centredness’ is, therefore, a co-construction.

The researcher sought to demonstrate that students are active agents in the construction of teacher-centredness and to show how their perceived deficit status, their expectations of teacher behaviour, and their ‘playing of the game of rupture’ influenced teachers to assume the ‘dominant’ position in lessons. The students’ internalization of the need for teacher visibility or surveillance and of their perceived deficit status produced and reproduced teacher dominance. Thus, the taken-for-granted view in classroom research that teacher dominance is an imposition by the teacher; demands problematization of further research. When classroom practice is viewed as a dialectical co-construction, then what has been termed students’ passivity must be recognized as their exercising of power. However, teachers are required to exercise power rationally so that they are able to accomplish their responsibility to the students.

This study has shown that students exercise their own power to move the lesson in the direction the teacher never intended. Conceptualizing classroom reality as a co-construction has important implications for the pedagogical reforms currently being implemented in Zimbabwe schools. In such reform endeavours, no
cognizance is taken of the students’ voice in curriculum transformation. This is in line with the tacit assumption that students do not make any significant contribution to education and classroom practices. For this reason, whenever change is proposed, in-service and pre-service programmes are mounted for teachers, never for students. It is often assumed that students’ classroom behaviour will change as and when that of the teacher changes. However, this position becomes a fallacy once it is acknowledged that classroom reality is as much a student construction as it is a teacher construction. It is a reality that validates and imbues the participants’ actions with meaning. An attempt to radically reform this taken-for-granted world is surely likely to be resisted, not only by the teachers but also by the students. The message is clear. It is time researchers on teaching and curriculum accorded students the attention that they deserve and contribution they can make to improve classroom pedagogy.

Finally, the major recommendation is that in the teacher education and training colleges as well as university faculties of education in Zimbabwe should among other things: Incorporate a variety of didactic approaches, especially those related to power and authority. Equip aspiring teachers to be able to undertake their pedagogical responsibilities professionally in a multifaceted perspective before the end of their training. In this way, such teachers would be better placed to exercise power rationally using a variety of methods, strategies, approaches and techniques in the delivery of lessons.

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