WHAT DE TEACHER SAY?
Talk as a Mode of Inquiry in Curriculum Enactment
in a Technical-Vocational Classroom

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This article examines the modes of triadic dialogue that emerged between a technical-vocational teacher and a group of 14 fifth form students at a senior comprehensive school in Trinidad. It also explores the teacher’s perspectives of the factors that influenced his talk during the practical sessions. Data collection techniques involved the use of classroom observations, as well as semi-structured follow-up interviews. Data analysis included discourse and conversation analysis, as well as the coding of data into themes and categories. The findings reveal that whole-class discussions dominated the hands-on practical sessions. In addition, greater monologic applications of the Initiation-Response-Evaluation (IRE) mode of triadic dialogue took precedence over Initiation-Response-Feedback/Follow-up (IRF) dialogic discourse. However, there was only one instance where dialogic engagement emerged from the IRF mode. Furthermore, the findings revealed that the lack of resources, time constraints, poor physical conditions, ineffective teacher training and professional development, lack of teacher knowledge and skills, and the examination structure were the factors that influenced the teacher’s classroom talk.

Introduction and Background

“Babooji,” Pooran said to his father, “de teacher say we have to forget everyt’ing we learn at home, an’ learn only what he say.”

“Teacher is a smartman, boy. Babooji teach you how to plant cane, Leela teach you how to dress, comb hair, teacher have’um different sometin’ for you to learn. You listen good to teacher.” (Ismith Khan, 2000, p. 3)

The legacy of colonialism in the Anglophone Caribbean has rendered types of talk in the classroom as reflective of two opposing camps and positions of power. In one corner, there is the teacher whose role is to initiate, direct, and regulate talk in the classroom. The teacher is in a
niche decision-making position to select content that is relevant and contributory to classroom discussions. In the other corner, there are the students whose habitual role is to exercise compliance, passivity, and acquiescence to the teacher’s instructions. The introductory excerpt, taken from Khan’s (2000) short story, “Pooran Pooran,” illustrates that the teacher’s talk takes centre stage in the classroom. Indeed, this traditional pattern of talk between teachers and their students is one that several West Indian writers have captured in their writings. Senior (1985), in “Colonial Girls School,” and Brathwaite (1977), in “Lix,” have both captured through their poetry the dominant role of the teacher in streamlining content for transmission to students. While Lamming (1953) in his novel, *In The Castle of My Skin*; Hodge (1970) in *Crick Crack, Monkey*; Kincaid (1985) in *Annie John*; Lakshmi Persaud (1990) in *Butterfly in The Wind*; and Clarke (2003) in *Growing Up Stupid Under The Union Jack* have vividly described the tension between “what de teacher say” and how the students are expected to respond, through numerous examples of talk between both parties within the classroom. Collectively, these writings are a mere fraction of the vast amount of West Indian literary depictions of classroom talk, specifically, triadic dialogue. The term *triadic dialogue* was coined by Lemke (1990) to describe the three stages or sequences of talk that usually occur between teachers and students during whole-class discussions. The three-step pattern commences when the teacher initiates the discourse with a question, followed by the nomination of a student to respond, then the response is evaluated by the teacher as either correct or incorrect; right or wrong; yes or no; or further feedback is provided to the student.

The major modes of triadic dialogue are the Initiation-Response-Evaluation (IRE) mode and the Initiation-Response-Feedback/Follow-up (IRF) mode, where the latter has several variations, such as IRFR, IRNF, and INR (Pinkevičienė, 2011). Although both modes entail three moves, the most notable distinction between them is embedded in the third sequence. The IRE mode is considered asymmetrical and a form of monologic discourse, where the teacher maintains control of the interaction with limited avenues for student talk (Haneda, 2005; Mehan, 1979; Mercer & Dawes, 2008). This mode is commonly referred to as the recitation script, as the teacher’s questions are intended to elicit fixed and correct answers from the students rather than to help them advance their views. In other words, “teachers and students speak according to very fixed perceptions of their roles,” where “conversation in this case is very one-sided, with the teacher asking all the questions and the students answering them” (Pinkevičienė, 2011, p. 98). Significantly, as teachers mainly dominate the discourse, their students are precluded from
opportunities to creatively explore their own ideas or ask questions, as their voices are devalued and marginalized (Barnes, 1992).

Notably, there seems to be a lack of consensus in terms of the usefulness of the IRE mode. Thornbury (2005) contends that “this kind of teacher talk has a long tradition and serves a very useful pedagogical purpose” (p. 80). It has “a built-in repair structure in the teacher’s last turn so that incorrect information can be replaced with the right answers” (Newman, Griffin, & Cole, 1989, p. 127). Moreover, its gatekeeping functions, in terms of moving along a lesson and selecting which students should speak, has not been overlooked. However, Lemke (1990) argues that “true dialogue occurs when teachers ask questions to which they do not presume to already know the ‘correct answer’” (p. 55). The IRF mode (Sinclair & Coulthard, 1975) is considered symmetrical, as there is more open dialogue, exchange of ideas, and discussions between teachers and students. If the teacher in the third follow-up move encourages “justifications, connections or counter-arguments and allows students to self-select in making their contributions” (Nassaji & Wells, 2000, p. 33), then the discourse moves from being monologic to dialogic or conversation-based. In this mode of triadic dialogue the type of initiation question used by the teacher can also encourage rich discussions and ideas. However, Haneda (2005) argues that regardless of the type of initiation question used, it is “teacher uptake in the follow-up move [that] appears to make triadic dialogue more dialogic by giving more opportunities for students to contribute” (p. 328). This view is further reinforced by van Lier’s (1996) emphasis that the third move in the IRF exchange can encourage students and teachers to “emancipatory forms of discourse” (p. 168). Teacher uptake in the follow-up move involves a plethora of techniques that engage students in “offering elaboration or comment, justification, explanation, clarification, asking for clarification, or exemplification” (Haneda, 2005, p. 316) and the challenging of their perspectives.

Triadic dialogue is an area of research that has not generated mass critical appeal within the educational domain in the Anglophone Caribbean. The majority of research studies conducted in Trinidad and Tobago on teacher-student verbal exchanges in the classroom have focused on students’ language competence, particularly the ongoing chasm between students’ usage of Standard English and Creole (e.g., James, 2003; Joseph, 2008; and Phillip-Peters, 2008). Moreover, the thrust of these research studies at the secondary level has shown fidelity to traditional subject areas such as English Language and Literature. Perhaps a possible reason for this is embedded within colonial prejudices, which promoted that educational advancement is attained...
through the mastery of traditional subjects and, as a result, what constitutes \textit{real} research has for the most part continued along those lines. Significantly, Campbell’s (1997) research on technical-vocational education and training (TVET) provides other reasons for the overshadowing of technical-vocational subjects by traditional academic subjects. Though lengthy, his explanation is insightful:

The education system and teachers had long been accustomed to the teaching of subjects like physics, history, or literature in formal educational institutions; and over many years local and foreign examinations of academic subjects had distilled and refined understanding of the level of knowledge appropriate to these subjects at various stages of students’ life. The same could not be said about technical/vocational subjects for example, welding, dressmaking, carpentry or refrigeration. In the Third World wherever technical/vocational education was tried, it is not unusual to find a considerable amount of disorder and confusion in the curriculum. This arose from the very novelty and unfamiliarity of teaching these subjects in the classroom, but also it must be admitted that since specialized technical/vocational education was geared to the work place there was a greater need to define aims more clearly than in the case of academic subjects. (p. 158)

Campbell’s (1997) research highlighted the fact that the advantage traditional academic subjects has over vocational subjects is embedded in their being “tried and tested” for years, which legitimized them as proper areas of study. Importantly, too, his statements, in terms of the lack of clarity of the goals and the objectives of the TVET curriculum, echoed the arguments of Benoit (1974) and Lillis and Hogan (1983). Judging from their perspectives, whatever document was presented as a vocational curriculum was usually afflicted with anarchy (Benoit, 1974) and “a prevailing lack of clarity in aims and intended outcomes” (Lillis & Hogan, 1983, p. 96). This appeared to be the case of the National Examinations Council’s (NEC) curriculum.

During Trinidad’s post-independence era, the NEC was established by Cabinet in 1965 as “an indigenous institution within the Ministry of Education to address the TVET needs of the country” (Trinidad and Tobago. Ministry of Education [TTMOE], 2002, p. 1). As part of nationalist post-independence fervour for indigenization, the establishment of NEC marked a symbolic change away from foreign examinations conducted by the City and Guilds of London Institute, “whose examinations were accredited by the Board of Industrial
Training (BIT)” (TTMOE, 2002, p. 1). At that time, the then Government’s policy was to replace foreign examinations with the local or regional equivalent. Therefore, the Cambridge General Certificate of Education Ordinary Level (GCE O’level) was eventually replaced on a phased basis by the Caribbean Examinations Council’s (CXC) Caribbean Secondary Education Certificate (CSEC) General and Basic Proficiency examinations for academic and certain pre-technician subjects. The NEC examinations for specialized Craft and Technician courses took the place of the City and Guilds examination. The NEC was responsible for syllabi, examinations, certification, and other related matters that fell within the purview of TVET programmes in the country (TTMOE, 2002, p. 5).

However, the effective enactment of the NEC curriculum for Craft and Technician programmes used in the senior comprehensive schools was weakened insidiously by a myriad of problems, mainly, the absence of clear goals and objectives in many syllabi and the questionable dissemination of the correct content to students. In terms of the welding craft practice, there were peaked levels of uncertainty and a lack of clarity about the syllabi used for the delivery of the subject. The fact that at the secondary level different syllabi were used by teachers raised several issues about the delivery of the subject. Two major documents that Welding TVET teachers relied on for guidance were the Ministry of Education’s National Training Board Craft Training Syllabus: Welding Occupations (TTMOE, 1984) and the Division of Technical and Vocational Education and Training’s Curriculum Instructional Material (Learning Elements for Welding Class) (TT. Ministry of Education and Culture [TTMOEC], 1992). In some instances, several teachers applied both documents for guidance in the classroom, while others depended on one. Although both shared similarities in terms of the units and topics, and emphasized a mixture of theoretical and practical work to be taught at schools, there were differences in their aims and objectives. Most importantly, information that related to the specificities of the amount of time that should be allotted to welding practical sessions and the manner in which they should be conducted in the workshop seemed to be sketchy in both documents.

Another area of contention pertaining to the effective delivery of the curriculum centred on the lack of professional development and training for TVET teachers. For Jennings (2012), adequate pre- and in-service training and development for TVET teachers must not be approached from the myopic perspective that “one size fits all.” Indeed, TVET teachers are a unique group of educational providers who are
expected to “provide academic and occupational instruction while integrating theoretical and hands-on-knowledge and preparing students for the work place” (Kerna, 2012, p. 40). Kerna’s research suggests that professional training and development for career and technical education (CTE) instructors should be continuous. In addition, these continuous professional programmes should entail a series of pedagogical training workshops, which must commence with a basic introduction to the terminologies, definitions, and theories of practice in education (Kerna, 2012).

Moreover, the diverse levels of TVET teachers’ technical and teaching proficiencies severely undermined their practice in the practical classroom. Many TVET teachers entered the teaching profession with mixed qualifications, skills, and expertise in their subject areas, which hindered in several instances the student-centred competency-based approach to enacting the NEC curriculum. In addition, poor facilities in the workshops prevented the effectiveness of practical sessions. In The Draft Pre-Feasibility Study for a Technical Vocational Educational and Training Programme (1993), a survey conducted on 45 secondary schools and two technical institutes revealed that that “about one third (1/3) of all Tec-Voc classrooms, workshops and laboratories are too small … for the present size of classes,” and “many rooms are poorly-ventilated” (p. 61). Additionally, workshops in schools have TVET equipment that are not functioning, outdated, and in dire need of repairs (p. 61). Moreover, the survey found that in relation to TVET materials and supplies, the majority of schools lacked adequate funding and resources (p. 61).

Undeniably, critical analysis of students’ and teachers’ experiences within technical-vocational classrooms is still an under-explored area of research. The somewhat bastardization of TVET within the local arena of education is noted by Campbell (1992), who stated that “it is regrettable that there have been insufficient evaluative studies of technical and vocational input since 1972” (p. 108). Therefore, Lewis’s (2009) fervent call for an “epistemological awakening” (p. 558) that promotes the perception of technical-vocational education as more than a means of supplying labour, by acknowledging this area of study as essential in providing experiences that are enriching to curriculum development, should not be ignored.

As former English Language and joint Form teachers of a group of Welding students, we were concerned about our students’ continuous pronouncements that the Welding teacher dominated “talk” during the practical sessions. It became a norm to hear the students’ say that “we cyah talk much in de practical” and “de teacher directing de show.”
Prior to their concerns, our perceptions were that practical work and student-centred talk were integral features of technical-vocational practical sessions. Their issues challenged our established perceptions, which eventually initiated our investigation into the modes of triadic dialogue used between the Welding teacher and his group of fifth form Welding students. As such, this qualitative case study examined the modes of triadic dialogue that emerged between a technical-vocational teacher and a group of 14 fifth form students at a senior comprehensive school in Trinidad. In addition, it explored the teacher’s perceptions of the factors that influenced his teaching during the practical sessions.

**Research Questions**

We posed the following research questions:

1. What are the modes of triadic dialogue used by the Welding teacher during the practical sessions?
2. What are the teacher’s perspectives of the factors that influenced his talk during the practical sessions?

**Methodology**

A qualitative case study approach was chosen for this study as we were more curious about “understanding the meaning people have constructed, that is, how people make sense of their world and the experiences they have in the world” (Merriam, 2009, p. 13. Italics in original). In other words, it provided us with an opportunity to understand the subjective realities of the participant. The case study tradition was also employed as we wanted to comprehend “a contemporary phenomenon in depth and within its real-life context” (Yin, 2009, p. 18). Furthermore, a purposive sampling strategy (Patton, 1990) was used to select the teacher for this study since we wanted to choose “information-rich cases which we can learn a great deal about” (Patton, 2002, p. 230).

Mr. Paul (pseudonym) was the Welding teacher of an all boys’ form class at a senior comprehensive school located in the Caroni Educational District. This senior comprehensive school prepared students for both the NEC and CXC examinations. He had three O’Level passes and a Diploma in Welding from the John Donaldson Technical Institute (1990-1993). In addition, he was pursuing further professional development, namely, the Technical Vocational Teaching Diploma, at the John Donaldson Technical Institute. Prior to entering the teaching profession
he had worked as a welding tradesman in a private institution for two years. He entered the teaching service as a Technical-Vocational Teacher 1 (TVT1), and he had at least four years teaching experience in welding at the senior comprehensive school. He was quite eager and committed to engaging in an investigation into his mode of discourse during the practical sessions.

Data collection consisted of non-structured observations. An audio tape recorder was positioned at strategic points in the workshop during the practical sessions. We also jotted down field notes during our five observations in order to ensure that we particularly noted verbal and non-verbal cues, such as changes to intonation, pauses, silences, paralanguage, initiating questions, remarks, feedback and follow-up moves, and concluding remarks. These cues became part of our repertoire of field notes. Follow-up semi-structured interviews after the classroom observations were conducted in order to understand the teacher’s perspectives of the factors that influenced his teaching practice. Moreover, semi-structured interviews permitted the teacher to express himself freely and enabled the researchers “to respond to the situation at hand, to the emerging world view of the [teacher]” (Merriam, 2009, p. 90).

Data analysis

All five observations took place in the welding workshop located in the Mechanical Department building at the senior comprehensive school. Although the teacher was observed five times during 90–minute practical sessions, the study focused on data from two of these observations. Both observations were welding tests with dissimilar objectives, processes, and outcomes; however, the teacher’s delivery of them was almost the same. Significantly, they were the observations that presented the most social interactions and talk which reflected the terminologies and substantial content that were germane to welding. The data based on classroom observations (Research Question 1) were audiotaped, then transcribed and analysed using Sinclair and Coulthard’s (1975) descriptive methodology for three-part discourse, with the addition of Conversational Analysis (Hutchby & Wooffitt, 1999; Pinkevičienė, 2011; Schiffrin, 1994). Our decision to combine both discourse and conversation approaches was influenced by Nunn’s (2003) perspective that the nuances and intricacies of classroom talk cannot be fully analysed by any one approach. For Sinclair and Coulthard (1975), lessons can be analysed at levels that take into consideration transactions, teaching exchanges, moves, and acts. This descriptive discourse
methodology entailed the coding of the data through the three-part framework that followed the steps of triadic dialogue.

Initiation moves were coded under teacher informs, teacher directs, and teacher elicits. Teacher informs included all the instances where the teacher presented concepts, new information, facts, and opinions. Teacher directs were occasions where the teacher involved the students in doing something (Sinclair & Coulthard, 1975, p. 50). Teacher elicits entailed all verbal exchanges that were intended to obtain students’ responses. The manner in which the teacher provided feedback was an important aspect of this dimension. Moreover, responses were the utterances and instances when students performed a task. In addition, follow-up moves were coded into distinct areas of evaluation, accept, comment, and probe. Evaluation identified teacher’s responses that were either assessed as correct or incorrect. Accept entailed instances where the teacher acknowledged appropriate responses with markers such as, “Good!” “Very good!” and “Yes!” Comments were statements or questions that encouraged students to elucidate, justify, expand, or add new information to their responses. Probe captured those occasions when the teacher spent time questioning a student in order to bring him to a better understanding. Furthermore, Conversation Analysis (Hutchby & Wooffitt, 1999; Pinkevičienė, 2011; Schiffrin, 1994) further described the sequential patterns of talk. Moreover, instances of turn-taking, such as the teacher’s nomination of students and the students’ volunteering of responses, were recorded. Other details that are usually overlooked in terms of conversations, for example, pauses, silences, paralanguage, and changes in intonation were examined. In relation to the second research question, audiotaped interview data were also transcribed verbatim and analysed initially by assigning codes to segments of the data. This coding process was then used to generate categories and themes that were linked to the research question. Finally, the interpretation of the data was presented using rich, thick narrative.

Ethical Considerations

In relation to ethical issues, doing research as insider researchers in our environment is “like wielding a double-edged sword” (Mercer, 2007, p. 12). Our positionality as teachers in the school when this study was conducted meant that we had the advantages of “easy access to the participants, a better understanding of the social setting, a stronger rapport and a deeper, more readily available frame of shared references by which to interpret the data collected” (Mercer, 2007, p. 13). However, there are obvious limitations of insider research, in that information may
be held back for fear of being judged (Shah, 2004), and “pragmatism may outweigh candour…[and], preconceptions may colour accounts, because so much is already known (or thought to be known) about the interviewer’s opinions” (Mercer, 2007, pp. 14-15). To address some of these ethical dilemmas of insider research we pondered on the information that we should disclose to the participant. We tried, as Platt (1981, p. 80) suggested, “to give some honest and reasonably full account of the rationale and purpose of [the] study…” but without disclosing our views on the issue. In other words, we did not “publicize [our] opinions about [our] research topic” (Mercer, 2007, p. 25). We also engaged in the process of member-checking, which involved taking data back to the participant to ensure that it represented his perspective. Additionally, meetings were held with the Welding teacher to arrange times that were convenient for the observations to take place, and a consent form was given to the teacher and he was assured of confidentiality. Nevertheless, there is the issue that although pseudonyms were given to both the students and the teacher, anonymity is problematic and cannot be guaranteed if the reader knows the school at which the researchers worked (Nespor, 2000).

Findings

Research Question 1

What are the modes of triadic dialogue used by the Welding teacher during the practical sessions?

The findings from the study in relation to the first research question are based on two of the individual classroom observations conducted with Mr. Paul and his class of 14 fifth form Welding students at a selected senior comprehensive school. The students of this particular fifth form class consisted of boys whose ages ranged from 15 to 17 years. The practical Welding sessions were 90 minutes each and took place during the morning sessions in the Welding workshop. The students had to conduct two tests, namely, the Spark Test for Mild Steel and the Peel Test for Gas Welding. The objective of the Spark Test was for students to be able to conduct a spark by placing two pieces of metal through the pedestal grinder in order to ascertain the different chemical reactions. The objective of the Peel Test was for students to be able to perform a deconstructive test in order to check the strength of a resistance spot weld. The findings revealed that both of these sessions, which should have focused on practical hands-on activities, were basically conducted in a theoretical manner. Mr. Paul’s role was more of an expert in the
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classroom where he dominated discourse. The sessions were more based on a teacher-centred approach to learning, where he engaged the students more in the recitation of previous information and regularly evaluated them for the correct answers. Therefore, these observations revealed that triadic dialogue was the predominant type of discourse used by Mr. Paul during both sessions. Moreover, greater monologic applications of the IRE structure took precedence over dialogic engagements of the IRF structure. However, there was one occasion when dialogic discourse emerged from the IRF structure.

Both sessions began in the workshop with a brief whole-class exercise entitled, “Safe Working Habits in the Workshop.” This entailed two basic activities:

1. The teacher ensured that all students wore Personal Protective Equipment (PPE), which consisted of long-sleeved coveralls, steel-tip boots, gloves, and goggles, before engaging in the practical exercises.
2. The teacher simulated the manner in which the pedestal grinder is supposed to be operated, and then a student was selected to model the activity.

These exercises began as a whole-class session at the western end of the workshop, where a blackboard and 20 desks and chairs were huddled together in rows and columns near a sequence of spaced concrete blocks that provided limited ventilation to the space. On both occasions, Mr. Paul continuously wiped his face with a handkerchief while the students wiped their foreheads with their palms. The whole-class session continued in the eastern end of the workshop, where welding tools and equipment, such as pliers, a vice, blow torches, a pedestal grinder, and a welder, were clustered near an unventilated corner. In these initial “Safe Working Habits in the Workshop” exercises, triadic dialogue (IRE) was evident. This was observed by the manner in which Mr. Paul began the sessions and when a student was nominated to model his prior simulation of the activity.

Excerpt 1

(1) Mr. Paul: Alright class, remember what I always say before we begin a practical in my workshop?

(2) Students: Yes sir, safety always comes first [some students answer while others do not].
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(3) Mr. Paul: *Good! You have to prevent yourselves from getting burns, arc eyes and shock in here. Let's move on! [entire class moves to the pedestal grinder at the eastern end of the workshop and they instantly form two rows]. Naresh go to the pedestal grinder and show us how you should start it* [teacher points to the grinder].

(4) Naresh: *Yes sir* [goes to the grinder].

(5) Mr. Paul: *Good. Remember what you have to do?* [looks directly at Naresh].

(6) Naresh: *Ah tink so* [smiles].

(7) Mr. Paul: *What do you mean yuh tink so!*

(8) Naresh: *Ah only joking, sir* [laughs along with the other students]. *Look! Ah doing it just like you sir* [Naresh simulates the start of the pedestal grinder]. *We have it correct.*

(9) Mr. Paul: *Very good, Naresh. You all remember how to start it?*

(10) Students: *Yes sir* [some students answer while others do not].

(11) Mr. Paul: *Good Naresh! Let's go back there* [points to the desks and chairs]. *Time is going.*

In this excerpt, Mr. Paul dominated talk through his usage of the IRE mode of triadic dialogue. He initiated the exercise with a known information question (KIQ) in Turn 1, “*what I always say before we begin a practical?*”, which in Turn 2 elicited a short customary response from the majority of the students. The response in Turn 3 was evaluated and deemed as appropriate based on his affirmation of “*Good!*” Here, the IRE mode of triadic dialogue is used for recitation purposes in order to stimulate the students’ memories of the procedure that usually precedes a welding activity. However, Mr. Paul continued with this sequence of triadic dialogue throughout this entire exercise. He established his position as the person in charge of talk through his regulation, selection, and timing of when students should collectively or individually speak. He took charge of turn-taking, spoke the majority of times, and maintained the fast pace of the exercise. This teacher’s actions clearly accentuated the ground rules of this asymmetrical type of talk. His role as the authority figure was apparent through his decision-making process, which entailed his nomination of a student (Naresh) and his evaluation of that student’s action and response.
The students appeared to be comfortable in their passive roles while the teacher was assertive as he directed the flow of questions and responses. Judging from their previous experiences with this teacher, they knew the type of responses and actions that he expected in “his workshop.” These students robotically relied on Mr. Paul’s answers rather than engaging in problem solving for themselves. Naresh’s statements in Turn 8, “Look! ah doing it just like you sir” and “We have it correct” highlighted a somewhat systematic and mechanical approach to learning, where mimicry of the teacher’s actions and obtaining the teacher’s approval seemed to be of paramount importance. It appeared that the students’ abilities to fully think critically and creatively were somewhat stifled in this exercise, as opportunities for further discussions were missed. His discourse was monologic as he transmitted information on safety without engaging the students in any discussion. However, from an alternative perspective, this exercise was regularly conducted at the beginning of Mr. Paul’s practical sessions; therefore, the familiarity of the topic may not have required intense discussions from the students. As follow-up opportunities for answering questions were not generated by Mr. Paul, his mode of discourse was more in keeping with the IRE approach than the IRF, which makes allowance for follow-up exchanges and discussions for students.

Another example where the IRE mode of triadic dialogue dominated the teacher-student discourse occurred when Mr. Paul directed the students’ attention to the use of the relevant tools needed to conduct the Peel Test. This exchange took place right after his session on “Safe Working Habits in the Workshop.” The teacher introduced this phase of the task so that the students would comprehend the practical activity.

**Excerpt 2**

(1) Mr. Paul: *Yes class, look over here you will see a vice and a pliers. How do you use these tools to conduct the Peel Test, Shawn?*

(2) Shawn: *Sir [pause] am [pause again] we put one end of the sheet metal into de vice.*

(3) Mr. Paul: *Good…but is that all, Lee?*

(4) Lee: *Den pull de other end.*

(5) Mr. Paul: *Yes! But with what, Mukesh?*

(6) Mukesh: *With ah pliers.*

(7) Mr. Paul: *Good….Lets begin now!*
This pattern followed the IRE mode of triadic dialogue. Mr. Paul initiated the discourse in Turn 1 with a known information question (KIQ), with the intention of obtaining a fixed response from a selected student. The student nominated, Shawn, provided Mr. Paul with the fixed answer in Turn 2, which led to the teacher’s positive affirmation of “Good” in Turn 3. Significantly, Mr. Paul steadfastly progressed with the exact sequencing pattern until the end of the exercise, as noted in Turn 7. Although triadic dialogue was appropriately used to call attention to the task, and was effective in ensuring that the students understood the activity prior to the hands-on exercise, it left no room for open discussions among the participants. Mr. Paul negated opportunities for students’ deeper probing and critical thinking skills in terms of other outcomes. Firstly, he could have asked students for other uses of the tools. Secondly, a more open-ended line of questioning would have stimulated further inquiries and discussions into the processes involved in the Peel Test. In this way, the discourse would have become more dialogic through the exchange of ideas and deeper probing.

There was one occasion where a significant change in Mr. Paul’s teaching style was evident. This occurred just before the beginning of one of the hands-on activities. At that time, he asked more probing questions and requested more elaboration of students’ statements. This encouraged the students to critically think about the objective and the processes involved in the Spark Test.

**Excerpt 3**

1. **Mr. Paul:** O.K. class these are the two pieces of metal that we are using in order to do the Spark Test. Remember how I said we have to use them?
2. **Student:** Yes, we pushing it in de pedestal grinder.
3. **Mr. Paul:** Good Mark! But is it just like that we are pushing it into the grinder you all think?
4. **Student:** Uum... I think horizontally sir, with de flattest side facing de grinder.
5. **Mr. Paul:** Thanks Troy, very good. Do you think that is the only way? Anybody can answer.
6. **Student:** Yes! [pause] No! [pause again] Now ah not sure. Sir there is another way?
(7) Mr. Paul: Uumm! Aah! [high intonation]. Remember David what Troy said, horizontally with the flattest side facing the grinder. Come on boys tell me something good.

(8) Student: Yes! [shakes his head up and down] I think you could do it vertical wise sir.

(9) Mr. Paul: Good answer Kevin. Why do you think so?

(10) Kevin: I feel both ways are right you know. What is the main thing is dat de metal on de flat side...like de tinnest side first should go into de grinder.

(11) Mr. Paul: Good! Good! [shakes his head and smiles]. Class, I want you all to remember that both ways are correct and that they do not alter the results of the test. But what do you think will happen if you put the fatter side in de grinder?

(12) Student: Nutting.

(13) Mr. Paul: You really think so Jevon? After Troy and Kevin said what is important is de flatter side going in. Come on fellas tink [long lapse].

(14) Student: It could cause damage.

(15) Mr. Paul: Good! Tell me more talk nah man! Don’t leave me hanging just so Suresh.

(16) Suresh: Ah tink if you put de bigger side first or de fatter side in de machine first it could stick and spoil de machine and it might be kind of hard to hold down de bigger side to push through the grinder, it would not be stable, you might get trouble and it could fly out your hand and hurt somebody.

(17) Mr. Paul: Suresh boy yuh right! You all heard what he said? If you put the larger side first into the grinder it can cause damage to you or others and even to the machine. Remember how we started the class with safety first [smiles].

This excerpt captured the manner in which Mr. Paul positively used the IRF mode of triadic dialogue. During this occasion, his ability to apply the third aspect of the triad, the (F) for follow-up, in a meaningful way allowed him to change the discourse from being monologic to a more dialogic inquiry-based form of teaching. At first glance, his
initiation into the discourse followed aspects of the IRE mode of triadic dialogue with his initiation of a KIQ. Although he started with a KIQ, it was deliberately used to call attention to the processes involved in the Spark Test and to commence an inquiry sequence. This was followed by the student’s correct answer and, then, his positive affirmation of “Good Mark!” However, the structure of his discourse changed when he asked open-ended questions in Turns 3 and 5, and by his statement, “Anybody can answer,” which invited responses from among the students. His intention here was to investigate how they were thinking about the processes of the Spark Test by having them openly share their views, opinions, and uncertainties. In so doing, he eventually shifted from having an authoritative role in the classroom as the students began taking charge of their learning.

Significantly, Mr. Paul used a plethora of follow-up techniques in order to encourage the students’ critical thinking. He used re-voicing or the repetition of a few students’ statements in order to get others to internalize information and validate certain concepts, such as “Remember what Troy said, horizontally with the flattest side facing the grinder” and “After Troy and Kevin said what is important is de flatter side going in.” Also, he asked more probing questions to engage the students, for example, in Turn 11, “But what do you think will happen if you put the fatter side in de grinder?” In addition, he made requests for further clarification, mainly in Turn 15, “Tell me more talk nah man! Don’t leave me hanging just so Suresh,” which engendered deeper analysis from his students. As some students volunteered responses, others felt at ease to voice their queries. One student even attempted to ask Mr. Paul a question in Turn 6. In this instance, Mr. Paul’s use of paralanguage, the high intonation of “Uumm!” and “Aah!,” indicated to the student that he expected more analysis in terms of the question that he had presented. Moreover, the student’s response allowed others to think deeply about the process. Significantly, incorrect responses from some students were not openly assessed as “wrong answers”; instead he encouraged the entire class to assess the validity of these responses before moving on to another concept. The variety of techniques applied by Mr. Paul during this instance certainly motivated the students to problem-solve and think critically about the Spark Test. Evidently, during this interval, the ground rules that applied between the teacher and the students fostered more opportunities for talk through open engagement and the sharing of information.

However, during the hands-on activity Mr. Paul still directed all verbal exchanges. This was the only occasion where some students actually participated in the hands-on activity. The instance occurred
during the last 20 minutes of one of the exercises. Mr. Paul selected two students, then he asked the other students to stand around the pedestal grinder. These two students were asked to discuss and demonstrate the processes involved in the Spark Test.

**Excerpt 4**

(1) Mr. Paul: After you push the metals in what would you notice Nico?

(2) Nicholas: Sir plenty of sparks.

(3) Mr. Paul: That’s right Nico.

(4) Student: Fuh real?

(5) Mr. Paul: You forgot the lesson that we did already? Nico or Chan go by the grinder and tell Hayden the answer. You all only talking and laughing! I have been watching you all a long time now! I am tired of telling you all to be serious in here! Remember empty vessels make de most noise! [directs his statements to three boys who were privately talking and laughing with each other].

(6) Chan: Hayden all of them do not spark up the same.

(7) Mr. Paul: Good Chan! You or Nico go and show Hayden [points to the pedestal grinder].

(8) Nico: Sir I will do it! [goes to the grinder and starts putting pieces of metal in it].

(9) Mr. Paul: Good Nico! Right! What do you see happening here? [pause].

(10) Student: S— [interrupted by Mr. Paul’s interjection].

(11) Mr.Paul: Nico or Chan tell them.

(12) Chan: One of de metals produce small sparks and the other one produce long sparks.

(13) Student: But Sir... ah have ah question.

(14) Mr. Paul: Just now Kyle. Good Chan! What does that mean Nico? I know you know the answer! You are a bright fella.

(15) Nico: Well remember it is a test so de different sparks showing de different amount of carbon in de metal. Their carbon properties are different.
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(16) Chan:  
De low speed carbon have 0.2% and de high speed carbon have 1%. De one with more carbon was giving out more longer sparks and de metal with less carbon giving out small sparks. We did it in de lesson on Tuesday.

(17) Mr. Paul:  
Very good! I know you two fellas know your work. You all are not jokers. We will finish on time.

The IRE mode of triadic dialogue was used during this hands-on activity. The activity began with an initiation question in Turn 1, followed by the selected student’s response in Turn 2, then by Mr. Paul’s evaluation in Turn 3. In this instance, the IRE mode of triadic dialogue seemed to have a gatekeeping function, as Mr. Paul managed the students’ discourse through more rigid selection of nominees and turn-taking. In addition, this mode was used to maintain the steady pace of the activity, which was evidenced by the teacher’s strong reliance on the responses and actions of two students, namely, Nico and Chan. They were the students favoured to present their responses, as they were nominated in Turns 1, 5, 7, 11, and 14. Nevertheless, their responses moved the activity forward. Nico demonstrated the activity in Turn 8, while Chan, in Turn 12, explained relevant aspects of the activity. Their combined responses in Turns 15 and 16 discussed the differences in carbon properties between the two metals. At that point, Chan did not wait to be nominated as he confidently continued from where Nico ended his answer. Chan’s contribution is particularly interesting as he made the link between the hands-on activity and the theoretical lesson that was taught in the “Tuesday” session. Both Nico and Chan appeared to be quite at ease when responding to the teacher’s questions. This excerpt may appear to be dialogic, based on these two students’ informative responses and the rapport that they had with each other. However, its discourse pattern is monologic, as Mr. Paul maintained his position as the distributor of questions and the evaluator of responses throughout the excerpt. The element of feedback is definitely missing from the discourse, as Mr. Paul maintained the IRE sequence until the end of the activity although double responses were offered in Turns 15 and 16.

The students’ collective responses were evaluated and affirmed as “Very good!” by the teacher in Turn 17. It is important to note that other students attempted to ask questions or converse with Mr. Paul but they were overlooked by him as he quickly selected his nominees. Therefore, opportunities for other students’ involvement through comments, elaborations, and deeper questioning were absent from the discourse. Here, the IRE mode of triadic dialogue was not used only as a recitation.
script. Rather, it functioned in a restrictive capacity to serve the needs of the teacher, who selected the two students he felt would have presented the most appropriate answers in less time. In essence, this excerpt displayed features of an authoritative, teacher-centred approach to learning, where there were set answers that Mr. Paul was looking for during the hands-on activity. In addition, he knew the students who would have responded as accurately as possible. As a result, the content from both Nico and Chan was to be accepted without any challenges while Mr. Paul regulated the flow of the talk. There was no interactive whole-class discussion as the other students acted mainly as bystanders, simply listening to and observing the events between the teacher and the two selected students. Many of the students remained voiceless, perhaps intimidated by the teacher’s use of the cliché that “empty vessels make the most noise.”

**Research Question 2**

*What are the teacher’s perspectives of the factors that influenced his talk during the practical sessions?*

Based on the findings of the second research question, the interview data revealed that several prominent themes emerged, namely, the lack of resources, poor physical conditions, ineffective teacher training and professional development, lack of teacher knowledge and skills, examination structure, and time constraints.

Mr. Paul indicated that a lack of government funding for the provision of resources, such as properly functioning equipment, tools, and materials, influenced his teaching practice, particularly in terms of his practical sessions:

> You know that we only have one welding machine for the past 20 years and both me and another teacher have to share it. Most of the times as you could see we don’t have all the parts for the machine to use it to teach a practical class properly. The foot pedal is stuck right now and sometimes there are power surges that prevents us from using the machine for practical sessions. In the Peel Test we did not even have enough 20 gauge metal sheets. That is why I have to show dem students how to use it. I have to talk more because of this. Sometimes I have only two students do the hands-on practice and then the machine shuts off. At other times I have to show them alone. I complain too but nobody take me on. So I have to teach in de classroom side of the workshop instead.
Mr. Paul therefore alluded to the negative impact that can ensue when the critical welding machine and the pedestal grinder are either not working or in a deplorable state. This meant that teaching would be more teacher-directed and theoretical, with limited opportunities for students to engage in practical activities.

Additionally, Mr. Paul contended that the lack of materials to conduct his practical sessions affected his classroom practice:

_You know I would like people to understand, the supervisors, the principal, the Ministry that welding is an expensive craft. It is not like auto-mechanics where you would scrap an engine and then put it back together for another session. Each time I have a class I need fresh materials and I do not get all that I need. Look, for the Spark Test everyone should have had two pieces of material to put into the grinder, but I could not do that, de material was short. Some students get to do it while others do not. So sometimes I try to teach in a way so they could visualize the practical through what I say._

Mr. Paul highlighted that the limited quantity of materials allocated for his welding practical sessions deeply hinders his ability to conduct the hands-on approach to students' learning. Therefore, he improvises by talking through the practical by focusing on whole-class discussion.

Teacher knowledge and skills was another pivotal factor that influenced classroom practice. Mr. Paul contended that while he had knowledge and skills of most of the content areas of the syllabus, he lacked the knowledge and skills in terms of how to teach in a more student-centred way. However, he admitted that the traditional, teacher-directed approach had worked for him in the past, which resulted in students' success in examinations. Moreover, given time constraints and an examination to prepare for, the traditional approach seemed more commensurate with the classroom realities and context:

_Most of the times, I understand the content areas of the syllabus. There are some grey areas in the syllabus itself in terms of content but especially in how to teach more student-centred. It states we must do this, but I never really explored it because I don’t know it. You know the traditional way, where I in charge, you know where I am the authority, works for me. I have students who are successful in passing the welding exam. In any case we only have two years to teach the subject. So given the amount of work, time is a problem because they have to write an examination, so I have to basically move it along, take control of_
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discussions as I feel this group work business takes too much time.

In other words, Mr. Paul also confessed that time constraints predisposed him to take charge of classroom discussion and adopt, many times, a more monologic and didactic approach to teaching so that he could cover all areas of the syllabus in the stipulated time.

Mr. Paul also noted that the pressure of examinations influenced his practice. He further indicated that in Trinidad and Tobago the education system is exam-oriented and that teachers are judged on their examination results. As such, teaching to the test is important:

The NEC welding examinations is really a theoretical written test. You know 100% is written. There is no practical exam or even any internal assessment based on the hands-on skills, so I focus on the theory paper. I have to teach what is coming for the exam, so when we have practical sessions and de machines are not working I do whole discussion with class and teach them like if it is a theoretical session and prepare them for the exam. No harm in that the exam theoretical anyway. In we country everything is about passing the exam, we are judged on that.

Findings also revealed that teacher training and professional development was another salient factor. The training workshops were criticized as being two theoretical, ad-hoc, rushed, top-down and not suited to the needs of the teachers or classroom realities. As such, teachers did not benefit as the workshops were ineffective and vague especially in relation to teaching skills:

I really, really feel that most of those training sessions do not really help me you know. Most of the times you sit and listen whole day. You don’t have time to actively take part. They really don’t show you how to teach, just a set of information. Also is like one big training for everybody. Your individual needs about what you want out of the training don’t count. It is one for everybody. Sometimes this don’t make sense. Another thing is that it is rushed and sometimes no follow-up immediately or feedback afterwards.
Discussion and Conclusion

This study presented and addressed two research questions. The findings from the first research question revealed limited opportunities for dialogic talk as the monologic mode of triadic dialogue, the IRE, was predominantly used by the teacher. Its purpose as a recitation script (Haneda, 2005) was appropriately applied in Excerpt 1 when the students were required to recall information that was customary to them. However, its gatekeeper function in Excerpt 2 where the teacher continuously nominated who should speak, and its usage again as a recitation script, arrested the students’ opportunities for exploring and exchanging ideas in relation to the test. Gutierrez (1994) contended that in classrooms where activities are strictly based on the IRE mode of triadic dialogue, the students are limited to brief responses to the teachers’ questions. In essence, the discourse remained monologic, where the teacher controlled what counted as knowledge as he did not allow the students to elucidate further in terms of the content (Haneda, 2005, p. 314). In Excerpt 4 a more authoritative text unfolded, as the teacher purposely nominated the two students who he believed would have provided the correct answers. Our findings share similarities with Nystrand’s (1997) conclusions that many teachers have a tendency to rely heavily on the IRE mode of triadic dialogue in their classrooms. If, as Lucas, Spencer, and Claxton (2012) indicated, “good vocational teachers deliberately seek to engineer rich conversations between learners at different stages” (p. 67), then our findings exposed a dearth of rich conversation-based discussions between the teacher and the students.

There was one instance where the teacher effectively used the third step of the IRF to guide the students’ learning. On this occasion, as presented in Excerpt 3, the teacher’s follow-up move promoted open sharing of information among the students, opportunities for conversation-based discussions, students’ application of critical thinking and problem-solving skills, hesitant moments for deliberation, and further exploration of the content. In this instance, the teacher allowed as many students as possible to answer without much nomination. Significantly, he did not seem to be pressed for time as he allowed the students to provide explanations during their turns.

We argue that the teaching and learning process must become more transformative by relinquishing its tight grip on transmission approaches. In terms of talk, feedback in the form of follow-up is of paramount importance. More specifically, the manner in which it is applied in the technical-vocational arena can create a new dawn for inquiry-based
learning during practical sessions, thus allowing vocational students to make substantial contributions to their learning. Unfortunately, one instance of follow-up is insufficient in any classroom if students are to share in the how, why, and what they are learning, moreso, in technical-vocational practical classrooms that are intended to be more activity based. However, the extent to which teachers can capitalize on opportunities for talk depends on a multitude of factors.

The findings that resulted from the second research question disclosed several factors from the teacher’s perspective, which, based on his enactment of the NEC curriculum, influenced his talk during the practical sessions. Some of these include the pressures of preparing students for a purely theoretically based examination, the lack of resources for conducting effective practical sessions, the need for ongoing professional development and training for teachers, unsuitable physical classroom conditions, and the lack of knowledge and skills. Our findings shared similarities with Lewin’s (1985) and Kerna’s (2012) notion that there is need for continuous practical professional development and training for technical-vocational teachers, which includes a balance between theory and practice. Moreover, these instructors must be exposed to concrete teaching strategies from educators, which they can model in their classrooms. In essence, they should be taught the virtues of how to develop their critical thinking, problem-solving, and creative thinking skills as opposed to being instructed on what to teach. This will contribute to their understanding that “vocational pedagogy is then the tactical orchestration of classroom talk, activities, challenges, grouping, available resources, role models and so on” (Lucas et al., 2012, p. 12). While there are factors that are similar across contexts, it is also important to unearth factors that are specific to the local context, as in this case. This study revealed the significant role that examinations play in the society of Trinidad and Tobago; it was touted as a major factor influencing the teacher’s talk.

The findings showed the definite need for improvement in terms of the issues presented by the teacher during the follow-up interviews. We argue that improvement in technical-vocational education necessitates injections of time, finances, resources, and astute planning. We further acknowledge that the way forward is not without challenges; however, to address the needs of technical-vocational teachers is indeed a step in the right direction. Unbelievably, the NEC curriculum for schools has been in existence in Trinidad and Tobago since the mid-1970s; however, there are few research studies that investigate its enactment at the secondary level. Importantly, too, this national curriculum has been replaced at the
secondary level by CXC’s CVQ, which holds the promise of a more lucid curriculum. As a more practical oriented examination, CVQ contrasts with the theoretical emphasis of the NEC examination. We believe that opportunities for engaging in practical classroom research should not be missed as in the case of the NEC curriculum. Although this paper contributes to the field of study on classroom talk, further investigations are necessary in the local context. Many researchers have declared that the IRE mode of triadic dialogue has permitted teachers to control classroom discourse; however, Candela (1998), in her ground-breaking study, contradicted this view. Her study highlighted a reversal in the power dynamic between teachers and students. This interesting slant opens avenues for future investigations into classroom discourse in the Trinidad and Tobago context. In addition, issues pertaining to gender can unearth interesting results. It would be intriguing to find out if the traditional power dynamic of the IRE structure is upheld in technical-vocational practical classes where female teachers predominantly teach female students. Moreover, as this study was limited to one teacher and one class in one school in central Trinidad, a more comparative approach may include schools, classes, and teachers from other educational districts across Trinidad and Tobago. Significantly, diverse follow-up strategies employed by technical-vocational teachers using the IRF mode of triadic dialogue, and their perspectives of the factors that either militate against or effectively facilitate their talk during practical sessions are other areas that warrant further investigation. Overall, the scope of research into classroom talk is expansive and necessitates further exploration in order to enrich the Anglophone Caribbean’s research base in this field of study. We suggest that educators consider Lucas et al.’s (2012) notion that

consistently good vocational education learning environments are full of opportunities for feedback, both from the ‘teacher’ and, increasingly, from the vocational learner as he or she becomes more and more self-aware and adept at noticing what is going on as he or she learns. (p. 60)

We argue that to improve the quality of practical sessions there is a need to take heed of the quality of classroom talk.

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