Walsh’s Classroom Modes and Interactional Features of Teacher Talk in Science Class at DCS Semarang

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Abstract

This research aims to find out how the realization of classroom modes and interactional features of teacher talk and identify the interactional features that either support or hindrance student's learning in science class elementary level. The descriptive qualitative method is applied in this study. Twelve lessons from 7 teachers were transcribed and analyzed using the Self Evaluation of Teacher Talk (SETT) framework adapted from Walsh (2006) supported by data interview. The findings show that all four classroom modes can be seen in all of the lessons, but classroom context modes were found in a limited portion. The teachers performed all interactional features where the most frequent occurrences are teacher echo, display question, seeking clarification, content feedback, and extended teacher turn. The lesser proportion of the interactional features are scaffolding, extended wait time, referential questions, direct repair, confirmation check, extended learner turn, teacher interruptions, form-focused feedback, and turn completion. From all the interactional features that have been employed, seeking clarification, content feedback, scaffolding, and extended wait time are strategies that potentially support students learning. On the other hand, teacher echo and display questions were found to hindrance students’ learning potentially.

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INTRODUCTION

Teacher talk is essential to language teaching. It is the primary source of comprehensible target language input in the instructed language learning environment; thus, it plays an integral role in the organization of the classroom and the processes of acquisition (Nunan, 1991 in Szendroi, 2010). In line with that, Cook (2000) in Hermanto (2015) stated that teacher talk, which occupies a special place in the target language classroom, is closely related to the success of students' target language acquisition. It is a crucial factor because teachers construct or obstruct learner participation in classroom interaction through their choice of language (Pratiwi, 2018).

It is crucial to seek a better way to understand how the organization and management of the classroom are held because it is through speech that teachers either succeed or fail to implement their teaching. Teacher talks should always serve the objectives of providing students' acquisition and acquaintance with the language, promoting learning, and initiating class interaction leading to communication.

In the area of classroom interaction and teacher talk, plenty of studies have been conducted. Glover (2018) suggested that a focus on categories of teacher talk can support academic research for the supervision and evaluation of teachers by managers and self-development purposes by teachers themselves. Romero, 2009 suggested that teachers avoid monotony in correcting homework, introduce new ways of starting or ending a lesson, and reduce the teacher's focused sequences by using more open-ended questions; the repetitive and monotonous talk will block learning opportunities (Gharbavi & Iravani, 2014).

Research investigation on teacher talk by using SETT that has been conducted (Lucero & Rouse, 2017; Murekson, 2017; Soraya, 2017; Wasi’ah, 2017; Mimma & Syamsul, 2016; Hougham, 2015, Mori & Qassemi, 2015; Poorebrahim, Talebinejad, & Mazlum, 2015; Suryati, 2015; Widya, 2015; Shamsipour & Allami, 2012; Wang & Huan, 2011; Inceçay, 2010; Rohmah & Zuhri, 2006). In the English as a Foreign Language (EFL) context, those studies tried to identify features of the teacher's language use and interactional strategies that support or hinder students' learning opportunities.

From the supporting view, confirmation checking, scaffolding, direct error correction, content feedback, and content-based discourse follow-up can support students' learning (Mimma & Syamsul, 2016; Murekson, 2017; Poorebrahim et al., 2015; Widya, 2015). On the other hand, teacher interruptions and turn completion are said to be become hindrances. Extended teacher turn, limited wait-time, extensive repair, and teacher echo erected some obstacles in the way of learners’ participation and consequently minimized interactional space (Miri & Qassemi, 2015; Poorebrahim et al., 2015; Wasi’ah, 2017).

In the classroom mode, research showed that overriding practice around material texts as well as skill and system mode coupled with the focus on display questions curbed the learners' active involvement in more dialogic discussions. Furthermore, it is reported that the teachers' over-reliance on L1 and translation could contribute to less L2 exposure and communicative setting (Soraya, 2017; Mori & Qassemi, 2015; Suryati, 2015).

Little is known about how the classroom modes and interactional features were practiced in content subject setting that use English as the medium of instruction. Based on it, this research attempts to examine the realization of classroom modes and interactional features of teacher talk in science class elementary level setting, in order to seek a better understanding and give further contribution to the theory and practical teaching knowledge.

METHOD

This research employed a qualitative approach, case study. It was held in a private elementary school in Semarang, Indonesia's Central Java Province. The school was using English as the medium of instruction in teaching subject lessons.
The participants of this research were 7 science teachers from upper grade (4-6 grade), since in the elementary lower grade, science lessons were integrated with Bahasa Indonesia lessons. The techniques of data collection were classroom video recordings and interview. Twelve lessons have been recorded that each lesson ran for 30 minutes in which recent L2 classroom communication research, five to ten lessons were considered an acceptable quantity from which to generalize and make conclusions. (Seedhouse, 2004). After then, the recorded lesson was transcribed. By using Walsh’s (2006) adjusted SETT framework, the classroom mode and interactional features of teacher talk were identified and analysed from the transcripts.

RESULTS AND DISCUSSIONS

Classroom Modes of Science Class

In the frame of SETT, Walsh (2006) classifies classroom mode into four. Those are managerial, materials, skills and systems, and classroom context mode.

This research found that all classroom modes, managerial, material, skill and system, and classroom context appeared in the teaching and learning process.

Managerial mode found throughout the classroom sessions. It can be found that teachers implemented this mode in the beginning and the middle of a lesson. The pedagogical goals found are to transmit information, organize a learning environment, refer to a material, introduce an activity, and change from one mode of learning to another mode.

Extract 1 is an example of how managerial mode was implemented at the beginning of the lesson.

Extract 1

1 T: Ok. Anybody still remember the last topic we discussed? Alexis?
2 S1: Organs of human
3 T: Ok. Organs of human. What did you learn from that part generally, do you still remember?
4 SS: ...
5 T: We learnt about?
6 S2: bone
7 T: Yes, about bones. What else, any other ideas? Just remember, Jojo?
8 S3: How your bones work.
9 T: Ya, how your bones work.
10 S4: movement
11 T: Our body movement. Yes, great job Vee.
12 S5: functions of skeleton
13 T: The functions of our skeleton. OK. Justin.
14 S6: ( ) movement
15 T: Sorry?
16 S6: animal movement
17 T: Animal movement. OK. Nice

On the extract above, the teacher performed a suitable managerial mode at the beginning of the lesson. The teacher was trying to relate students' knowledge about the previous material. The teacher was trying to build a good learning environment and drive students' focus to the lesson material. This kind of practice is essential to keep the students motivated since motivation may help them start learning and maintain their learning once they are motivated. (Dörnyei, 2001; Gardner, 2007; Palmer, 2009 cited in Vibulphol, 2016). It worked well since the students responded to the teacher’s question directly, and the turn-taking went smoothly without any pause. It shows that students were engaged and ready to follow the lesson. Here the pedagogical goals are to transmit information and to organize the learning environment being fulfilled by the teachers.

Extract 2 shows how the teacher implemented managerial mode in the middle of the lesson.

Extract 2

144 T: So, from electricity or electrical energy, it converts or changes into sound light and heat energy. You can hear from the speaker, you can see the picture and also you can feel the heat when you touch it when the television is on. Yes Kay?
145 S10: my television is not
146 T: Your television is not producing heat?
147 S10: no
148 T: Maybe because the ac is really cold. But you might find only slightly warm.
149 S2: Ms, My Oma has a child name Om G. Om G, itunontoseharian, dan
Extract 2, lines 149 to 152, show that the teacher gave her student enough opportunity to deliver his idea although the student was using English mixed with the Indonesian language. In this case, S2 was trying to share his experience of how his grandma's television was broken. The class responded with laughter, so in line 155, the managerial mode was implemented. The teacher tried to create a conducive classroom environment by asking the students to pay attention, giving feedback and asking for clarification. In line 157, the teacher was using discourse marker now to change the modes from classroom context into the material mode. She was asking the students to refer back to the material on question number 3.

Material mode deals with the use of some learning material. This mode is where the material dictates interaction among teachers and students. The research found that materials mode appeared very frequent in the observed lesson. The material mode found in the classes serves the pedagogical goals: elicit learner responses concerning the material, check, clarify, evaluate, and extend learner contributions.

Extract 3 is an example of how the teachers implemented materials mode in the lesson.

**Extract 3**

86 **T:** So we cannot create energy and also we cannot destroy it. Now I need Benneth.

The first picture. Where does the boy get his energy?

87 **S12:** from food.

88 **T:** Yes. Good job. From food. So, the boy gets energy from food.

89 **S13:** ()

90 **T:** Rain, please be nice. Say something that is nice

91 **S13:** I just read Ms.

92 **T:** From the second one. How is he using the energy? Look at the picture.

93 **SS:** ...

94 **T:** Ok. Come on girls, boys answered the question. How is he using the energy?

95 **S14:** play with the sand

96 **T:** =Play with the sand, or building a sand tower

97 **S:** tower

98 **T:** sand castle or tower

99 **S:** Ms, what if I just said building Ms?

100 **T:** Yeah, building tower. It has not finished yet. I need a girl another girl to answer number two.

101 **SS:** me/me

102 **T:** Audrey, number 2. Where does the television get its energy?

103 **S15:** The television gets its energy from electricity

104 **T:** Yes, correct. Electricity. The television gets energy from the electricity. What can of energy does it make?

105 **SS:** me/me

106 **T:** I will choose who has not answer. Joice?

107 **S16:** sound and light

108 **T:** Sound and light. One more?

109 **S16:** heat


As can be seen, in Extract 3, the teacher was using the material mode to deal with the lesson material, doing and discussing questions from the material module. Line 86, 92, and 102 show that the teacher followed the questions from the materials to elicit students' responses. Initial-Response-Feedback (IRF) pattern presents in these extracts. In line 86, the teacher gave an initial question, which was responded well by the students. In line 87, the teacher gave clarification and evaluative feedback that the answer was correct. She also tried to extend students'
contribution by asking further questions in line 108 that once again responded well. Here, the goal is to check, clarify and evaluate students' answers related to the material.

The teacher used skills and system mode to produce correct answers, manipulate new concepts, give corrective feedback, and display correct answers. The example of how teachers implemented skills and system mode is shown in the following extract.

**Extract 4**

63 **T:** Fish. OK. Who wants to explain with your own words how it works for a fish to breathe? Vincent

64 **S5:** Water move in to the fish mouth and then out from the gills ...

65 **T:** And then, done? Can anyone add some other information? Joshua

66 **S13:** After the water get into the fish mouth, the gills will absorb the oxygen

67 **T:** Yes, the gills absorb the oxygen, and then?

68 **S13:** The carbon dioxide and the water

69 **T:** Absorb the carbon dioxide?

70 **S13:** No. The carbon dioxide and the water will come out from the fish

71 **T:** Oh. Ok. So, so human, we are breathing and breathe. You want to say breath is breath. Take a deep breath. Ok.

Breathing

Looking at extract 4, line 63, the teacher tried to manipulate a new concept to the students. After explaining the idea of the respiratory system of fish, she asked the students to retell it in their own words. By retelling, the teacher expected that students would easily understand the concept of the fish respiratory system; it could also give students enough opportunity to speak the target language. In line 67, the teacher repeated the student's answer to show that it was the correct answer, followed by asking for clarification in line 69 to ensure that students were still on track and could produce the correct answer. Furthermore, in line 71, in the term of language form, the teacher gave corrective feedback on the pronunciation of breath and displayed how to pronounce breathing correctly.

Classroom context mode is connected to external factors of the learners that have something to do with the context that the teacher will present. It can be the belief, attitude, experience, culture of the students. In short, this mode aims to enable learners to express themselves clearly and promote oral fluency. The following extracts are examples of classroom context mode that could be found in the lessons observed.

**Extract 5**

84 **SS:** Can you eat it?

85 **SS:** Ye::s

86 **T:** Yes, it is very yummy. It is crunchy and watery.

87 **S1:** Like jelly?

88 **T:** No, it is not.

89 **S1:** =coco crunch

90 **S2:** =Msadasantannya

91 **T:** Ada santannya (laugh) maybe you can like crackers but it is watery inside. Have you tried it?

92 **S1:** No, I eat (gesturing) the inside

93 **T:** Oh, you eat the flesh?

94 **S1:** Yes, it's good

95 **T:** These seed will grow from this part. ((Pointing the picture)) of the coconut. Ok what do you think if the coconut seed is not covered by a thick covering?

In extract 5, started by a student's question in line 84, the teacher tried to build a context by relating her lesson with students' experience and allowing her student to participate in the discussion. The result was, the student had a
longer chance to ask for clarity and express his idea.

Interactional Features of Science Class

According to Walsh (2011), the interactional features is teachers’ language to build and maintain relationships. Figure 1 shows interactional features that can be identified in science classrooms observed.

The research found that all of 14 interactional features proposed by Walsh (2006) can be found among the lessons observed. The top 5 features that the teachers frequently employ are teacher echo (20.89%), display question (20.27%), seeking clarification (14.26%), content feedback (11.74%), and extended teacher turn (11.32%).

Extract 6 shows how teacher echo confirms the correctness and amplifies a learner’s contribution for the rest of the class (Walsh, 2014).

Extract 6

91 T: The next question, what kind of energy does it make? Lha, It makes...
92 SS: ...
93 T: mention what energy that
94 SS: = sound
95 T: sound
96 SS: light
97 T: light, and what else
98 SS: heat
99 T: and heat, ok. It makes sound, light and heat energy.

Extract 7 shows how the teacher applied display questions to check students’ understanding.

Extract 7

80 T: our clothes. What conversion of energy?
81 SS: electrical
82 T: Yes. If a stove what conversion of energy?
83 S15: fuel

Extract 8 lines 23 and 25 show how the teacher sought clarification to clarify what the student said.

Extract 8

23 T: Eyes to breathe?
24 Ss: (laughing)
25 T: Since when you use your eyes to breathe?
26 S4: No
27 T: Yeah. You take in air and you breathe out air through?
28 S3: Nose and mouth

Content feedback is shown in extract 9, line 77. The teacher made sure that students got a correct understanding of the material.

Extract 9

73 T: Ok, so human taking oxygen from?
74 SS: lungs
75 T: No, the source of oxygen, we get our oxygen from?
76 SS: lungs
77 T: No, the air. The air

Using these three strategies, the teachers checked, clarified students’ understanding, and ensured that students’ answers were correct.

Extended teacher turn occurred when the teachers were explaining the content material to the students. It is shown in extract 10.

Extract 10

15 T: Boys and girls, here, later on, you will know what organs that we need in our breathing system and their functions. And also, their functions. Boys and girls. Animals’ respiratory system. Of course, they also have organs like human. We use our organ to breathe. But in human we have
16 S3: lungs

The four least teacher strategies that rarely occurred in the lessons observed are extended learner turn (0.98%), teacher interruptions (0.70%), form-focused feedback (0.35%), and turn completion (0.28%).

The extended learner turn strategy was used when the teacher gave time to her student to elaborate his answer that, as a result, the learner turn was being extended.

Extract 11

153 S9: Convection needs something a... what can I say ... air or ... some a ... something that has mass
154 T: ok
155 S9: so it can a ... transferred
T: ok
S9: conduction transfers through a ... I mean solid metal or good conductors
T: ok
S9: and radiation transfers through electromagnetic waves

Teacher interruptions (0.70%), interruption during learner's contribution, the example in extract 12 in line 75 shows how the teacher interrupted learner's contribution to direct the student into what she was meant, and the students fully aware that he was able to give the correct answer in line 76.

**Extract 12**

73 T: Good job. Heat is the amount of energy in our body. And then how do you measure that? What is the measurement? Lleyton
74 S9: Thermometer... what should I say a ... Celsius, Fahrenheit, and Calvin
75 T: That is temperature. I am talking [about energy
76 S9: [oooh, its joules

Form focused feedback (0.35%); giving feedback on the words used, not the message. In extract 13, in lines 89 and 91, the teacher gave input on the word electricity. Her student was mistaken in using the word electrical in line 88 as one type of energy and electricity as its source of energy.

**Extract 13**

87 T: Two. Where does the television get its energy? Look at the TV picture. Where does the television get its energy? From
88 S12: Electrical energy
89 T: From the electricity. (Write on board)). From the electricity and what form of energy that we get from electrical
90 S12: [light
91 T: [The name of the energy is electrical energy. The next question is, what kind of energy does it make? Lha, It makes ...

Turn completion (0.28%), completing a learner’s contribution for the learner. The example in extract 14, line 128 shows that the teacher ended and seemed to ignore her student’s contribution without listening to the reason because the limitation of time so there was not much time to be wasted

**Extract 14**

125 S4: Ms, may I go to the restroom?
126 T: But, why did you bring your water bottle with you?
127 S4: because ... because ...
128 T: This time Ok Jeje. But next time, I want you to refill your water bottle during lunch time.
129 S4: can I?
130 T: Go right now. Ok, faster. Faster.

**Strategies that Supports Students’ Learning**

Strategies that support students’ learning opportunities are seeking clarification, content feedback, scaffolding, and extended wait time.

Seeking clarification is when students or teachers ask to clarify something. Extract 15 shows how a student performed seeking clarification in line 74. The teacher re-explained in line 77, followed by another seeking clarification by the student in line 78 to make sure that her understanding is the right one. The conversation was going smoothly here the student got enough opportunity to engage with the lesson material.

**Extract 15**

73 T: Water doesn’t have very much oxygen dissolved in air. But then the gills have large surface area to allow fish to absorb enough oxygen from the water.
74 S7: Ms, I don’t understand.
75 T: You don’t understand. Okay. Which part?
76 S7: the last one
77 T: Okay. Gills here have a large surface to allow the fish to get more oxygen from the water. To absorb more.
78 S7: so fish get oxygen from the water
79 T: Yes. Okay. [...] Content feedback is when the teacher focuses on the message rather than the words used. In the following extract, the teacher corrected the content knowledge feedback at least twice when she had a question and an answer session to review the materials for the students. She started with a question about the definition of heat in line 66. Student 14 could not reply to it, so she moved to the other students. In line 69, student 15 replied with an answer that was the incorrect one. Student 9 realized in line 70, which led the teacher to give content feedback to the
class in line 71, that she was asking about the definition of heat, not the heat resources. Then she moved the question to student 16, which could be answered correctly in line 72. Another content feedback was given in line 75; when student 9 responded to her question on the energy measurement unit, the teacher corrected the content knowledge. Realized of his mistake, the students corrected his response and answered it correctly in line 76.

**Extract 16**

66 T: What is heat?
67 S14: ...
68 T: Do I skip? Jane.
69 S15: Heat sources are everything that can make...
70 S9: =heat
71 T: = heat. I am not talking about the heat source, but the heat. Moses
72 S16: Heat is the amount of the energy in our body
73 T: Good job. Heat is the amount of energy in our body. And then how do you measure that? What is the measurement? Lleyton
74 S9: Thermometer. What should I say a.. Celsius, Fahrenheit and Calvin
75 T: That is temperature, I am talking about energy
76 S9: oooh, its joules

The scaffolding strategy is shown in extract 17. In line 197, the teacher tried to give an extension by asking why to give students further opportunity to explain what radiation is. Student 19 used the opportunity to provide more explanation in line 198 smoothly. The same strategy was applied in line 201 when the teacher asked for further descriptions about convection. Student 2 seemed to have an incomplete answer in line 202. The teacher realized it and gave another extension by providing a cue. Given the signal by the teacher, student 2 completed his response with the appropriate one.

**Extract 17**

195 T: [...] Next, what about the sunlight that can dry your cloth? Cha-cha
196 S19: radiation
197 T: Why?
198 S19: because the sun transfer the heat

199 T: ok, it transfer the heat to the clothes and the clothes get dry. And then what about, hot air balloon? Bryan
200 S2: convection
201 T: Why?
202 S2: Because of the fire a...the hot air rises and... transfer to the hot air and the balloon will get bigger and bigger...
203 T: the balloon itself
204 S2: the balloon will float even more

Extended wait time happens when the teacher allows sufficient time (several seconds) for students to respond or formulate a response. The following extract shows how the teacher was giving time for her student to complete her answer. The teacher started with a question in line 77 and asked student 17 to answer her question. Student 17 was having several paused times and seemed not to have enough confidence in answering the question. In line 79, the teacher gave extended wait time and a little encouragement to lead the student to provide the correct answer in line 80.

**Extract 18**

77 T: [...] temperature. What is it actually? Divine.
78 S17: Temperature is.. temperature is the ...
79 T: ... go on is correct
80 S17 ... to describe how hot or how cold an object is.
81 T: Yes, temperature is actually the measurement to describe how hot or how cold an object is.

**Strategies that hindrance students' learning**

Two strategies found potentially hindrance students learning opportunities that performed frequently were teacher echo and display questions. The following extract shows how it is employed.

**Extract 19**

159 T: the speaker. What source of this thing?
160 S2: Electricity
161 T: Electricity and then changes into, what energy
162 S2: Sound

615
It was a discussion session after students were given time to do an exercise. In this case, teacher echo serves a function to clarify information to other students in the class, so they know what the correct answer is. Although it is still relevant to use teacher echo to hear the correct information in lesson discussions in elementary-level cases, this strategy can hinder students' learning opportunities. The data interview found that repeating students' utterances sometimes seemed to become a habitual action. This finding is in line with Miri & Qassemi (2015), Poorebrahim et al. (2015), Wasi'ah (2017). It supports Walsh (2014) statement that teacher echo could become a negative thing if teachers only repeat utterances without knowing the purpose of this feature. When it becomes a habit, the interaction seems to become repetitive and monotonous. It does not reflect a real communication and will block learning opportunities (Gharbavi & Iravani, 2014).

**Extract 20**

15  T: Food is the source of our energy. My question is how can we use the energy in our daily live?
16  S5: play
17  T: For playing, OK, S6?
18  S6: running
19  T: Running, Celine?
20  S7: walking
21  T: Walking, What else? Onei?
22  S8: working
23  T: Working.

From the extracts, it can be seen that the students can understand the material and give a short answer. Unfortunately, in this case, the student's response was short and straightforward. The teacher did not try to extend her question to give a more significant opportunity for students to speak more. It shows a solid support to Walsh's (2002) statement that display questions typically produce shorter answers or simpler responses from learners; hence, it can hinder learning situations. Display questions should be followed up by other strategies such as seeking clarification and referential questions. Having those kinds of follow up will promote discussion and help learners improve oral fluency.

**CONCLUSIONS**

This research revealed that the classroom context modes were found in a limited portion of the lesson observed out of the four modes. All interactional features were performed. The interactional features which more dominant rather than others are: teacher echo, display question, seeking clarification, content feedback, and extended teacher turn. While the lesser proportion of the interactional features are scaffolding, extended wait time, referential questions, direct repair, confirmation check, extended learner turn, teacher interruptions, form-focused feedback, and turn completion.

From all the interactional features that have been employed, several strategies frequently occurred in the lesson being observed that could be potential strategies in helping the students get engaged and allow interacting in the learning activity are seeking clarification, content feedback, scaffolding, and extended wait time. On the other hand, teacher echo and display questions could become a hindrance for students' learning.

To lessen the negative impact, teachers should be informed about their instructional practices and the importance of teacher talk. (Walsh 2002). Teachers must be made aware that teacher talk contributes to student classroom participation. Understanding this can better manage their instructional talk and improve student classroom participation patterns (Zacharias, 2014).
It can be recommended that teachers work out more on classroom context mode, which can promote discussions and help the students practice their oral fluency. In terms of teaching strategies, teachers should increase the usage of scaffolding and extended wait time. The massive usage of teacher echo and display questions should be avoided or followed up by other strategies such as seeking clarification or referential questions to create learning opportunities for the students.

As for further research, according to Hougham (2015), SETT was only made to carry teacher-fronted interaction; as a result, the viewpoints of the learners are noticeably missing. As Nunan (1996) remarks out that to understand what is happening on within language classrooms, the voices of the teachers and the learners must be heard.

REFERENCES


