Meaning making, agency, and languaging in dialogic interactions on academic writing tasks: A sociocultural discourse analysis

Zahra Kheradmand Saadi, Shiraz University, Iran

For Vygotsky, language is a cultural-psychological concept emerged from social interactions and is applied for higher cognitive functions such as thinking, meaning making, and knowledge construction. In this study, a sociocultural perspective was applied to analyze the language produced by 40 sophomore Iranian EFL learners during dialogic interactions on writing tasks in order to investigate 1) the talk types that students produced, and 2) the agency they employed to make meaning through languaging. The typology of talk proposed by Mercer (2004) was used as a framework for talk analysis. Seven categories of talk were found in the corpus, among which, Cumulative talk had the highest frequency. The students exercised two types of agency during interactions, debilitative agency in Disputational talks and facilitative agency in Cumulative and Exploratoty talks. The categories of talk, their frequencies, and the amount of agency the students employed in the categories of the talk can be justified by Lantolf and Poehner’s (2014) argument that the interactions and dialogues considered micro-level practices are affected by macro-level structures in which they are developed.

Keywords: academic writing, agency, dialogic interaction, languaging, meaning making

1. Introduction

This study addresses the use of spoken language as a mode of meaning making during dialogic interactions in a writing class. A sociocultural perspective was used to analyze the classroom interactions to investigate how learners use language as a social cultural tool to think, make meaning, and exercise their agency.

1.1. Sociocultural discourse analysis

Methodologically, discourse analysis is divided into five sub-categories of structural, cognitive, social cultural, critical, and synthetic analysis (Wu, 2010). Social cultural discourse analysis originated from Vygotskey’s (1978) Sociocultural Theory (SCT) of Mind addresses the processes of teaching, learning and development. According to Forman and McCormick (1995), discourse analysis, having roots in sociocultural theory, is an asset for understanding teaching and learning practices. As they state

There is a good reason why the combination of discourse analysis and sociocultural theory could be a powerful means for understanding teaching and learning: Sociocultural theory proposes that instruction entails cognitive, social, cultural, affective, and communicative aspects, and discourse analysis allows one to examine those aspects as they occur in real time and in naturalistic settings. (p. 150)

SCT is a psychological theory which addresses individuals’ learning and development and believes that social and cultural factors frame mental activity and functioning (Lantolf & Poehner, 2014). Therefore, “The task of a sociocultural approach is to explicate the relationships between human action, on the one hand, and the cultural, institutional, and historical contexts in which this action occurs, on the other” (Wertsch, 1998, p. 24). Vygotsky (1978) considered teacher-student communication an important factor in learner’s achievements and believed that through teaching which occurs in a social cultural context, socially and culturally constructed knowledge is transformed into individual’s own knowledge. Moreover, Mercer (1997) considers classroom sociocultural discourse as the backbone of understanding teaching and learning psychologically since the language is both a psychological and a cultural tool for making sense of an experience, sharing an experience with others, and making sense of it jointly (See also Al Shalabi & Salmani Nodoushan, 2009; Allan & Salmani Nodoushan, 2015; Bhatia & Salmani Nodoushan, 2015; Birjandi, Alavi & Salmani Nodoushan, 2004; Brown & Salmani Nodoushan, 2015; Johns & Salmani
Nodoushan, 2015; Nemati, Salmani Nodoushan & Ashrafi-zadeh, 2010; Salmani Nodoushan, 2003; 2006a,b,c; 2007a,b,c,d,e,f; 2008a,b,c,d,e,f; 2009a,b,c,d,e,f; 2010a,b,c; 2011a,b,c,d; 2012a,b,c; 2012a,b,c; 2013; 2014a,b; 2015a,b,c,d,e,f; 2016; Salmani Nodoushan & Alavi, 2004; Salmani Nodoushan & Daftari-fard, 2011; Salmani Nodoushan & Khakbaz, 2011; Salmani Nodoushan & Khakbaz, 2012; Salmani Nodoushan & Montazeran, 2012).

"Sociocultural research is not a unified field, but those within it treat communication, thinking and learning as related processes which are shaped by culture" (Mercer, 2004, p. 138). According to Lantolf and Poehner, (2014, p. 12), "social relationships are culturally organized at both macro and micro level of granularity”. They believed that micro-level activities such as conversations and interactions between people in the society are affected by macro level structures such as religion, family, education, politics, education, etc. Therefore, meaning making through interactions take place in situational and sociocultural interventions (Wertsch, Del Rio, & Alvarez, 1995) and "meanings are interpreted within a socio-cultural envelope created by the discourse system from which a person speaks” (Chao & Liang, 2014, p. 17).

1.2. Meaning making, languaging, and agency

Meaning is originated from social language use (Vygotsky, 1987) and is defined as “the internal structure of sign operation” (Vygotsky, 1997, p. 133). According to Vygotsky (1987), meaning is represented in two different ways. The first one, called meaning, is the stable literal dictionary meaning of the word which is socioculturally engendered. The other one, called sense, is the internal system engendered through language and refers to the particular individual’s understanding. According to Mahn (2008), integration of thinking and speech results in the structure or system of meaning which is called verbal thinking by Vygotsky. Verbalization and verbal thinking refer to both speaking and writing (Swain, 2006; Vygotsky, 1987). Swain (2006, p. 96) considered language both “an agent in the making of meaning” and “the conveyer of meaning” and referred to languaging as “The process of meaning making and shaping knowledge and experience through language” (Swain, 2006, p. 9). Swains’ notion of languaging is an important component of language learning

Language about language is one of the ways we learn language. This means that the language (the dialogue or private speech) about language that learners engage in takes on new significance. In it, we can observe learners operating on linguistic data and coming to an understanding of previously less well understood material. In languaging, we see learning taking place. (Swain 2006, p. 98)

Some studies tracked the process of second language learning and showed that the learners reformulated their previous knowledge, accepted or rejected new knowledge, and constructed knowledge through languaging (Swain, 2005; Swain and Lapkin, 1998, 2002; Watanabe, 2004). According to Swain (2006) the sociocultural framework provides an environment for learning; however, the learners’ agency determines acceptance, rejection, and construction of knowledge through languaging. Agency is related to approaches which consider languaging as an integral component of language learning (Blin & Jalkanen, 2014).

An important issue which has been concerned in sociocultural approaches to language learning and development is agency; the actions done by individuals mediated and constructed by social, cultural and contextual factors (Van Lier, 2008). Agency is the "socioculturally mediated capacity to act" (Ahearn, 2001, p. 112) and is "shaped by our historical and cultural trajectories" (Van Lier, 2008, p. 164). Learner agency is an important constituent of language learning in sociocultural frameworks (Donato, 2000; Gao, 2010a; Lantolf & Pavlenko, 2001; Van Lier, 2008; Zheng, 2013) and is believed to be interactive and emergent determined by personal and social cultural factors (Bandura, 1989). Van Lier (2008) examined agency in six real classroom activities and came out with six levels of agency from passive in which the learner was unresponsive to committed in which the learner collaborated in the interaction voluntarily. However, he argues that being active does not guarantee effective learning and physical passiveness does not indicate mental apathy.

1.3. This study

Writing, a higher cognitive function develops from interpersonal-social interactions-and inter-personal-inner speech-functioning (Vygotsky, 1987). Therefore, “social interaction provides an ideal context for mastering complex cognitive skills like writing” (Weissberg, 2006, p. 3). The interaction in which the individuals are involved in problem solving, collective thinking, has two aspects of historical and dynamic (Mercer, 2004). It is historical in the sense that it takes place in a specific institutional and cultural context and the individual involved in the interactions bring
their past knowledge and experiences to the current interactions. Besides, it is dynamic in the sense that the basis of shared knowledge is in the process of development and future knowledge can be constructed on the past interactions and experiences. Similarly, according to Wickman and Ostman (2002), learning is a dynamic process in which individuals interact with the world; through this interaction, they make similarities and differences in relation to their previous knowledge and fill the gaps in their knowledge.

The researchers of this study noticed that through written corrective feedback on the learners’ writing tasks, their difficulties are not revealed since many factors affect their performance on writing tasks; it is through face to face interactions with the learners that the teachers can resolve misunderstandings and mismatches (Wu, 2010). Based on the SCT, the individual, the language as a social-cultural tool, thinking, socialization, writing techniques, and social-cultural factors are involved in performing a writing tasks (Arcidiacono, & Gastaldi, 2011; Edwards, 1990; Mercer, 2004). In this study, intervention sessions were held to mediate the learners’ performance on writing tasks through dialogic interactions since Mercer (2004) believed that conversational interactions can be used to achieve joint understanding and intellectual activity, accomplish teaching, and make the students aware of using language for thinking together and creation of more shared understanding.

After the intervention sessions, the classroom discourse was analyzed to understand how learners used language to think and make meaning in a particular social cultural context. It is believed that through the discourse analysis of interactions, the learners’ negotiated meaning making and their cognitive or communicative difficulties will be revealed since “discourse is often referred to as thinking made visible” (Rudnitsky, 2013, p. 2). This study followed Mercer’s (2000, p. 20) belief that language should be considered an “interthinking” process and it should be studied in a framework comprising “intellectual, developmental, pragmatic, social and cultural functions of language”. This study can be a contribution to understanding learner participation in interventions and how they employ their agency and language for making meaning and constructing joint understanding in a particular social cultural context.

2. Method
2.1. Participants
A convenient sample of 40 Iranian male and female EFL learners participated in the study. They were sophomore students majoring in English Language and Literature who took part in an advanced writing course which was held for two hours every week for a semester of six months. Furthermore, they participated individually in five intervention sessions which were held weekly in order to discuss their writing tasks produced during the writing sessions.

2.2. Materials and instruments
2.2.1. Corpus
A corpus of classroom talk consisting of 200 ten-minute dialogic interactions produced by 40 learners and a teacher (one of the researchers of this study) during five intervention sessions was used. The interactions which were about both micro and macro-level features of the texts the students had written during the writing sessions were recorded and then transcribed for further analysis.

2.2.2. Talk Framework
The researchers used Mercer’s (2004, p.146) framework to analyze the conversation. His typology consists of three forms of talk:

*Disputational talk*, which is characterized by disagreement and individualized decision making. There are few attempts to pool resources, to offer constructive criticism or make suggestions. Disputational talk also has some characteristic discourse features. Short exchanges consisting of assertions and challenges or counter assertions (.Yes, it is. .No it’s not!).

*Cumulative talk*, in which speakers build positively but uncritically on what the others have said. Partners use talk to construct a common knowledge by accumulation. Cumulative discourse is characterised by repetitions, confirmations and elaborations.

*Exploratory talk*, in which partners engage critically but constructively with each other’s ideas. Statements and suggestions are offered for joint consideration. These may be challenged and counter-challenged, but challenges are justified and alternative hypotheses are offered. Partners all actively participate and opinions are sought and considered before decisions are jointly made.
Compared with the other two types, in Exploratory talk knowledge is made more publicly accountable and reasoning is more visible in the talk.

2.2.3. Interviews
The teacher conducted some informal social talk (Mercer, 1995) with the students before or after the classes. The teacher tried to get information about their place of birth, their environment of upbringing, the kinds of schools they attended (public, private) before entering the university, the language classes that they had passed, their socio-economic situation, and their parent's level of education and jobs. Then, based on the obtained information, the learners were categorized into Working, Middle, and Upper classes.

These classes have their own definitions in this specific sociocultural context. The working class learners were from small cities or villages in which schools and language classes didn't provide the learners with good quality teaching and learning environment. Mostly, their parents had only high school diplomas and did not receive higher education. Their fathers were workmen or employees at factories and offices and their mothers were housewives. This group of learners were reticent and passive both during the writing and feedback sessions. The middle class learners had passed their education in high quality public schools and had attended English language classes in popular language institutes for some years. Their parents had college education and were mostly teachers, doctors and engineers. Middle class learners said that they have had friendly relationships with their parents although their behaviors have been controlled by them all the time. The upper class learners had passed their education in private schools or high quality public schools. Most of them had passed some years abroad or had attended American or British schools. Their parents were educated holding college degrees and were rich possessing factories and companies. The upper learners said that when their parents want to make decisions they ask their opinions and accept their views if they were justified. In contrast to middle class learners who were cooperative during class tasks, upper learners were competitive which was representative of their socio-economic situation.

2.3 Data collection and analysis procedures
The participants took part in an academic writing course at Shiraz University. At the end of each writing session, the learners were given a topic and were asked to use different techniques of support and methods of development which they had learnt during the session to complete writing tasks. The students took part in ten-minute intervention sessions individually every week in which they received mediation on their tasks produced in the writing session. Through interactions, the students and the teacher discussed both micro level (writing such as grammar, spelling, and punctuation) and macro level (such as content and organization) aspects of writing. The learners were supposed to revise their texts based on the mediation and hand them in the next session as their final drafts.

To make sure that the students participate in the interventions, the teacher allocated 20% of their final score to intervention session participations. The interactions between each student and the teacher were recorded and transcribed for further analysis. Moreover, during the semester, the teacher tried to engage in social talk (Mercer, 1995) with the students and obtain some information about their personal life and their socio-economic situations as far as possible; however, she was careful not to invade their privacy. From the beginning of the course, the teacher tried to establish a good rapport with the learners so that the learners do not consider her as the authority and take an active role during the mediation; she called them with their first or nick names which is not common in the Iranian university contexts. The teacher investigated the interactions to see how the learners respond to mediation, use language for knowledge construction, and exercise their agency.

3. Results and discussions
In this section, the results of data analysis are provided both qualitatively and quantitatively. The excerpts were analyzed in terms of talk types, learner’ agency, and their languaging. Some of the interactions on the writing tasks could not be divided into clear-cut types of talk provided by Mercer (2004) since the exchanges consisted of different levels of talk. According to the results, seven types of talk consisting of uni-level (Disputational, Exploratory, and Cumulative), bi-level (Disputational/Exploratory, Disputational/Cumulative, and Exploratory/Cumulative), and multi-level (Disputational/Exploratory/Cumulative) categories were found in the corpus. First, an example of each type is analyzed qualitatively through which and the learners’ agency and
lauging are discussed. Then, through quantitative analysis, the frequency of occurrence of each talk type produced by learners from different social classes is presented.

**Transcript 1: Disputational Talk (Student: Male, high social class)**

1 T: You need to reword this sentence.
2 S: Why?
3 T: It is vague. The reader may have difficulty in understanding it.
4 S: But I do not think so...if I change it, it will not be interesting anymore.
5 T: Being clear is more important than being interesting.
6 S: I love its structure, I prefer to keep it.

The talk is a Disputational one in the sense that there is no evidence of joint understanding. Both sides give their points of view irrespective of each other’s views. The student does not ask the teacher why the sentence is vague and how he can repair it. When the student says “I do not think so”, he means *No it is not vague* which is a characteristic of Disputational talk. Both sides challenge each other; however, there is no sign of knowledge construction. Although the learner is active and shows his agency during the interaction, he disregards what the teacher suggests and does not engage in productive learning. Through langauging, he rejects the teachers’ solutions by giving his reasons and resist to maintain his writing style.

**Transcript 2: Cumulative Talk (students: Female, working class)**

1 T: “A Violin”?
2 S: I mean one.
3 T: I know but this is the second time you are referring to it.
4 S: Yeah yeah the second time.
5 T: Then you need to change it to “the violin”.
6 S: yeah...the violin...Uhumm...ok sure.

This transcript includes the characteristics of a Cumulative talk. The participants’ ideas are not challenged; repetition (“yeah...the violin”) and confirmation (“yeah the second time”) of ideas are used. The ideas of the teacher are accepted by the student and the partners do not provide arguments and counter arguments. The student take part in the interaction; however she does not show high levels of agency; her initiative does not challenge the teacher and she does not contribute to the interaction. Through langauging, she activates her previous knowledge about using articles, shows that she knows the rule and accepts the teachers’ comment.

**Transcript 3: Exploratory Talk (student: female, high class)**

1 T: What do you mean by this sentence "He was in a habit"?
2 S: He was addicted but now he is under recovery.
3 T: But we say some one is in habit of doing something!
4 S: We say it when someone is regularly doing something, here I mean he has quitted using drugs.
5 T: So...it may be an expression.
6 S: What about checking a dictionary?
7 T: Sounds a good idea.
8 S: Let me check it. I found it...there are some expressions...Being under a habit, kick the habit of doing something and beak the habit of doing something.
9 T: I see...so, you need to just change the preposition in your sentence.

This excerpt has the characteristics of an Exploratory talk in which the teacher and the student try to construct joint understanding. Both sides give their opinions in order to make a correct decision. The student suggests using a dictionary for further understanding, a suggestions which is accepted by the teacher since it sounds reasonable to consult with the dictionary as a reliable source for
accurate knowledge. Thus, they make a joint decision through language which is a cultural tool to use another mediating tool, a dictionary, to develop their knowledge. The students exercises a high level of agency through her contribution to discussion and proposing using dictionary. Here, it is shown how lanauging and the students’ self-initiated agency result in language learning. She refers to her previous knowledge and even rejects the teachers’ knowledge about the word and tries to gain new knowledge.

**Transcript 4: Disputational/Cumulative (student: female, middle class)**

1 T: What? Airhead?
2 S: yes airhead.
3 T: It is not correct.
4 S: I am sure it is, yes it is an expression.
5 T: I know but it is a slang.
6 S: Ok then what?
7 T: In formal writing, you are not allowed to use slang.
8 S: Oh really...but I have seen such expressions in story books.
9 T: Yah you are right but here we deal with academic writing which does not allow the use of such forms.
10 S: Oh yeah... I got it now, so slangs are forbidden in academic writing.

In this excerpt, the discussion begins with short exchanges of disagreement. The interlocutors challenge one another without seeking joint understanding (“it is not right’... “I am sure it is”). However, the discussion continues with longer exchanges which are representative of Cumulative talks in which repetitions and confirmations are found in the turns (“yeah you are right” or “so slangs are forbidden in academic writing”). Although the student gives counter argument at first, as the conversation goes on, she cannot argue with justification, so she accepts the teachers’ point. In other words, by languaging, first, she resists to accept the teacher’s mediation by saying “I am sure it is correct”; however, she decides to question her previous knowledge and gain new knowledge about academic writing. During both levels of talk, the learner exercise her agency; however, in the disputational talk her agency does not result in learning and her knowledge is constructed through accumulation.

**Transcript 5: Exploratory/Cumulative (student: male, middle class)**

1 T: You have just used visual elements to describe the garden!
2 S: Since I want the reader to imagine the garden.
3 T: Why not using other senses?
4 S: You see, I deal with their visualizations, so visual elements suffice.
5 T: But I think in description, using other senses can be effective.
6 S: I have heard in our society, mostly, people are visually oriented.
7 T: But you may have audience from other cultures with different orientations.
8 S: Yeah... maybe.
9 T: Don’t you think that describing the sound of birds or smell of flowers can make the picture of the garden more complete?
10 S: Mmm...you are right. So I can use different senses as major supporting ideas and then elaborate on each.
11 T: Good. Sounds a reasonable style for description.

This conversation deals with a writing task in which the student were supposed to write a paragraph and use description as a technique of support. In the conversation, lines 1 to 7 are representative of Exploratory talk since the two partners present justified reasoning. The ideas are challenged with the purpose of joint knowledge construction. The student is active in providing reasons for the way he has described a garden. However, from turn 8, he confirms the teacher’s
suggestions and elaborates on the writing style and reformulates what the teacher has said regarding using different senses. Similarly, the teacher approves the student’s opinion in the last turn. Thus, after an Exploratory talk, the partners begin a Cumulative talk in turn 8 in which they build an understanding uncritically. In the first level of talk, the student is highly agentive and through languaging shows that he has justification and knowledge for what he has written. When he confirms the teacher’s comment in turns 8, he become less active; however, it does not indicate that he is not successful in learning. As the interaction goes on, he shows his new understanding of academic writing by languaging and proposes a solution which is accepted by the teacher.

**Transcript 6: Disputational/Exploratory (student: male, high class)**

1 T: You have not supported your main idea.
2 S: No! It is not the case!
3 T: Pardon?
4 S: I have written a whole page on it!
5 T: The length doesn’t matter.
6 S: Then what?
7 T: You need to justify it.
8 S: Haven’t I?!
9 T: For the readers?...No
10 S: But I have used many examples.
11 T: But you have just mentioned one major supporting idea and within that you have provided the examples.
12 S: Well, I think elaboration on one idea is more effective.
13 T: Why not elaborating some major supporting ideas? It can clarify the main idea better.
14 S: But I think sticking to many ideas confuses the reader.
15 T: Look at the other side...if you cannot give enough major supporting ideas, the reader does not accept your main idea.
16 S: So, two or three major ideas can be mentioned comprehensively and concisely not to confuse the reader.

This conversation which is about main idea and supporting ideas consists of two levels of talk, Disputational and Exploratory. At the beginning of the conversation, the student tries to defend his writing without any rationality. Short turns of argument and insistence can be detected through lines 1 to 10 in which the teacher and the student are active but not cooperative and productive. However, as the conversation continues, he discusses the issue with the teacher and tries to give reasonable comments in turns 12, 14, and 16, so that both sides can reach a joint point. Again in the Exploratory talk, both interlocutors are active similar to the previous talk level with the exception that this time they engage in the discussion constructively. By languaging, the student shows his opposition to the teacher; however, he continues the interaction with proposing rationalized ideas, elaborating on the teachers’ ideas, and constructing new knowledge about supporting ideas in writing a paragraph. During the whole interaction, the learner indicates a high level of agency; however, the quality of exercising agency is different in the two levels of talk. His activeness is not effective in new knowledge construction in the first level of conversation which is Disputational talk. Nonetheless, his agentive role in the second part of interaction (Exploratory talk) results in joint knowledge construction.

**Transcript 7: Disputational/ Exploratory/ Cumulative (student; female, middle class)**

1 T: Here, giving an introduction is redundant.
2 S: No, I do not think so.
3 T: Of course it is, starting an anecdote with a preface is not common.
4 S: I need to prepare the readers for what I want to say.
5 T: But you were supposed to write an anecdote not an expository essay!

6 S: If I start with an introduction, the readers become more interested in the topic.

7 T: But the introduction is like a sermon. People do not like sermons!

8 S: May be…

9 T: Why don’t you let them read your story themselves and get the point?

10 S: And what if they do not get it?! What about a moral conclusion at the end of the story instead of an introduction?

11 T: Well… it’s a better idea. You can give a brief moral ending but be careful not to provide a sermon.

12 S: Not a sermon…ok ok sure.

This conversation is about writing an anecdote. As it is shown, the conversation starts with disagreement and challenge (Lines 1 to 3). Arguments and counter-arguments are presented through short turns (“No, it is not”, “Of course it is”). The two partners engage in self-assertions and giving commands (“you should not start your story with a preface”). However, the disputation is not continued and the two sides start proposing justified arguments at the end of turn 3. The proposed arguments and claims are elaborated. Thus, after a brief Disputational talk, the participants move to an Exploratory level of talk in which both the teacher and the student give their ideas in order to make decisions collectively. Furthermore, the lines 11and 12 can be considered a Cumulative talk since the partners confirm each other's ideas and give positive assertions. The two sides’ view are accepted here without argument and challenge. In the last line, the student reformulates the teachers’ comment in turn 11 by saying "Not a sermon". In the first two levels of talk, the student is highly active; however her agency is effective for learning only during the Exploratory talk. In the first level, her activeness is represented in unreasonable arguments which leads to no new knowledge. In turn 12 which is the Cumulative talk, the student is less active compared to the previous talk types; she just confirms the teachers’ comment. However, it cannot be concluded that it was not useful for learning. In the three levels of talk, the student engaged in lanuaging. First, she argues with the teacher and defend the way she had started her text. Then, by giving her reasons and eliciting the teachers’ solutions, she tried to find the best way for writing anecdote. And finally, she accepts the teacher’s remark through lanuaging which shows that her knowledge about writing anecdote is changed.

In the quantitative section of data analysis, the frequency of occurrence of talk categories produced by males and females in different social classes during the dialogic interactions is presented. Moreover, the number of different talk types are determined. The categories are sorted from the least frequent to the most frequent talk types.

<table>
<thead>
<tr>
<th>Talk Types</th>
<th>f</th>
<th>%</th>
<th>Low M</th>
<th>Mid M</th>
<th>High M</th>
<th>Low F</th>
<th>Mid F</th>
<th>High F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disputational/Cumulative</td>
<td>13</td>
<td>4.0</td>
<td>2</td>
<td>1</td>
<td>4</td>
<td>0</td>
<td>1</td>
<td></td>
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<tr>
<td>Disputational/Exploratory/ Cumulative</td>
<td>25</td>
<td>7.6</td>
<td>3</td>
<td>1</td>
<td>5</td>
<td>3</td>
<td>7</td>
<td>6</td>
</tr>
<tr>
<td>Disputational</td>
<td>32</td>
<td>9.8</td>
<td>2</td>
<td>0</td>
<td>8</td>
<td>5</td>
<td>9</td>
<td>8</td>
</tr>
<tr>
<td>Exploratory/Cumulative</td>
<td>35</td>
<td>10.7</td>
<td>3</td>
<td>2</td>
<td>10</td>
<td>11</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Exploratory</td>
<td>42</td>
<td>12.8</td>
<td>5</td>
<td>2</td>
<td>9</td>
<td>8</td>
<td>10</td>
<td>8</td>
</tr>
<tr>
<td>Disputational/Exploratory</td>
<td>45</td>
<td>13.8</td>
<td>4</td>
<td>3</td>
<td>8</td>
<td>8</td>
<td>12</td>
<td>10</td>
</tr>
<tr>
<td>Cumulative</td>
<td>135</td>
<td>41.3</td>
<td>23</td>
<td>35</td>
<td>24</td>
<td>29</td>
<td>9</td>
<td>15</td>
</tr>
<tr>
<td>Total</td>
<td>327</td>
<td>100</td>
<td>42</td>
<td>44</td>
<td>68</td>
<td>69</td>
<td>51</td>
<td>53</td>
</tr>
</tbody>
</table>

The Cumulative type of talk was the most frequent type in the dialogic interactions. This can be justified by the fact that the learners participated in the intervention sessions in order to receive mediation and assistance. Therefore, most of the time, the learners confirmed what the teacher said since they regarded her as the more capable and knowledgeable partner. According to Wood, Burner, and Ross (1976), the teacher, being experienced and knowledgeable, facilitate learning of other less competent learners through scaffolding. Scaffolded dialogue refers to “achieving common understanding through structured and cumulative questioning and discussion which guide
and prompt, reduce choices, minimize risk and error, and expedite ‘handover’ of concepts and principles” (Alexander, 2000, p. 527).

One significant feature of Exploratory talk is challenging the interlocutor's point of view. The learners in the study did not engage in Disputational and Exploratory talk too much since they did not consider themselves to be in a position to challenge the teacher. Generally, in interaction with more experienced ones, the individuals try not to dispute since they consider the experienced partners as the source of knowledge. Although the teacher tried to develop a close rapport with the learners in order to encourage them to take part in the conversations, most of the time, the students confirmed what the teacher said uncritically. This can be due to the fact that the teachers are highly respected being considered the leading authority possessing the source of knowledge, skill, and behavior who are responsible for the individuals' intellectual and social development (Chao & Liang, 2014; Chen, 1990; Cortazzi & Jin, 1996).

Therefore, the reason for the frequent occurrences of Cumulative talk was that the learners needed assistance to improve their writing and were not knowledgeable enough to engage in knowledge construction. According to Patterson (2009, p. 3), "The interactions taking place during Exploratory talk take the form of co-construction of understanding, whereas Cumulative talk has elements of scaffolding”. The reason for the low frequency of Exploratory talk compared to the Cumulative talk was that the teacher and the learners had different powers and abilities and as Topping (2005) states

The greater the differential in ability or experience between helper and helped, the less cognitive conflict and the more scaffolding might be expected. Too great a differential might result in minimal cognitive engagement (let alone conflict) for the helper, and unthinking but encapsulated acceptance (with no re-tuning or co-construction) by the helped. (p. 638)

Most of the Cumulative talks were produced by working class learners which can be traced back to their power inferiority. They did not see themselves in a position to employ high levels of agency to challenge or criticize their teacher since they had passed their education in public schools and communities in which they were told to accept what the elders say uncritically. On the contrary, the learners from the upper class produced most of Disputational and Exploratory talks and the least numbers of cumulative talks. A possible explanation can be their socio-economic background. They were brought up in social and cultural environments in which they had the power and agency to challenge other's ideas. Most of them had attended private schools in which they were free to pose criticism against the teachers due to the intuition they paid. Moreover, the upper class learners had participated in several English language courses and had traveled to other countries which could have affected their cultural views about interactions and learning.

As it is shown in Table 1, males produced more Disputational and Exploratory talks compared to females, while females were involved in Cumulative talk more than males. The reason behind this can be the fact that in Iran as a male-dominated society (Kusha, 1987), the males have the power and agency to take initiatives, discuss their ideas openly, and criticize others. On the contrary, the females should respect others and speak carefully and uncritically since they are the subordinate group in the Iranian society. In such an environment, the women are considered less capable of thinking intellectually and reasoning rationally and from the very childhood, they are not allowed to take part in discussions and making important decisions.

The Disputational/Cumulative category has the least frequency among the talk types found in this study. An explanation which can be given is that the students could not easily pass a level in which they produced arguments and counter arguments and move to another level in which they accepted and confirmed the teacher' comments and ideas unarguably. As it is indicated, just one occurrence of this type of talk is reported in the upper class and it was produced by a female learner; the male in the upper class could not easily change his mind and give up the disputation or withdraw his position in the argument. The working class learners were not agentic enough to disagree or make decisions individually, so they did not produce much Disputational talk. On the contrary, the middle class produced this category of talk more than the working and the upper class learners. They were more powerful and agentive than the working class to initiate argument with the teacher and show their disagreement; however, they were not as powerful and knowledgeable as the upper class to provide reasonable arguments, justified challenges, and new hypotheses. They exercise a significant level of agency to challenge the teacher but were not knowledgeable enough to challenge rationally, so they had to confirm and repeat what the teacher said in the end.
Considering the four talk types of Disputational/Exploratory/cumulative, Exploratory/Cumulative, Disputational/Exploratory, and Exploratory, the upper class produced these four categories more than the other two classes. The reason can be the presence of Exploratory talk in these four categories. The upper class learners had the ability and agency to take part in discussions critically. Based on what they said through social talks, since their childhood, they had participated in decision making in the family and their views had been respected and were taken into account. Therefore, they had learnt to be active in the conversations, challenge others’ views and justify their words.

Based on the results, in the talk categories consisting of two or three levels of talk (bi-level or multilevel talks), the talk is started by a Disputational or an Exploratory talk. However, Exploratory and Cumulative talks are the two types of talk which are the terminating turns in multilevel talks. It is important to mention that this specific pattern was found in our specific social context in which the learners engaged in interaction about writing tasks. Thus, the learners used Disputational or Exploratory talks as tools to defend their writing or challenge the teacher when they received the mediation; however, as the talk went on, the students took part in Exploratory or Cumulative talk in order to get to a joint understanding or accept what he teachers said.

As it was discussed in the analyses of the excerpts, the learners employed their agency to reject or confirm new knowledge, restructure their previous knowledge, and co-construct meaning with the teacher through languaging. During the Exploratory and disputational talks, the students showed high levels of agency. Nevertheless, in Cumulative talk, the students’ agency is less evident since they confirm or elaborate on the teacher’s comments. During the disputational talk, although the students exercised their agency significantly, they did not engage in constructive language learning. This finding is in agreement with Van Lier (2008, p. 179) who argues that “not all enactments of agency are automatically conducive of learning”. Although the agency employed in the Cumulative talk was less obvious than the agency exercised in the Disputational talk, it was more effective in learning since it resulted in acceptance of an expert’s comments about academic writing. The agency in Disputational talk prevented the learners from constructing new meaning and knowledge by engaging them in useless arguments and debates. Therefore, we may categorize the agency to facilitative and debilitative agency. Facilitative agency employed in Exploratory and Cumulative talk leads to learning and meaning making, while debilitative agency exercised in Disputational talk impedes knowledge construction.

4. Conclusion

Through dialogic interactions on writing tasks, the teacher-researcher of this study mediated 40 sophomore English students’ performance on academic writing tasks. Employing a sociocultural discourse analysis, the researchers analyzed the interactions to find the types of talk that the students produced and the agency they employed to make meaning through languaging. Based on the findings, uni-level, bi-level, and multi-level categories of talk were revealed which showed that different social cultural contexts result in different patterns of language use. Instead of being a limitation, the overlapping and intermediate levels between talk categories are dynamic aspects of collective thinking, considered “powerful feature of the sociocultural approach” (Arcidiacono & Gastaldi, 2011, p. 13), in which joint knowledge develops and of future knowledge emerges from current knowledge (Mercer, 2004).

Based on the results, most of the interactions were Cumulative talks and the learners did not engage in Disputational and Exploratory talks due to different social and cultural factors. The results confirm Lantolf and Poehner’ (2014, p. 12) belief that “the macro level structures shape the kinds of social interactions that occur at the micro level”. Moreover, the Cumulative talk could not engage high levels of learners’ agency. To the contrary, during the Exploratory and Disputational interactions, the learners exercised their agencies significantly. However, the agency employed during Disputational talks can be considered debilitative agency since it prevented the learners from knowledge construction. Overall, the participants did not show their agency so much since most of the time, they were engaged in Cumulative talk. Similar to interactions which were affected by macro level structures, “the roles of learner agency are shaped by the cultural context in which the learning activity takes place” (Zheng, 2012, 633).

As mentioned, during the interactions, the learners mostly engaged in Cumulative talk; they did not participate in co-construction of knowledge. However, based on Fogel’s (1991) co-regulation, the activity should involve mutual cooperation in which learners regulate the mediator’s actions actively and “it is through co-regulation that individuals appropriate and ultimately internalize the forms of mediation available in a social environment and in this way eventually attain self-regulation” (Lantolf & Poehner, 2014, p.158). If the teachers are after the learners’ development
and knowledge construction, they should teach learners how to think together and provide an atmosphere in which through collective thinking and active participation, they can make meaning, employ their agency effectively, and improve their understanding.

It is recommended that the teachers encourage the learners to engage in Exploratory talk while learning different language skills since “exploratory talk is a crucial ingredient in the kinds of learning environments that support deep learning”. (Rudnitsky, 2013, p. 2) and it encourages the learners to “try out ideas, to hear how they sound, to see what others make of them, to arrange information and ideas into different patterns” (Barnes, 1992, p. 126). Moreover, Exploratory talk engages high levels of learners’ facilitative agency which leads to learning and development. According to Zhang (2008, p. 82), “the quality of student learning is closely associated with the quality of classroom discourse. If the teachers can improve the quality of classroom discourse, they can certainly raise the quality of student learning”. Therefore, further research is needed to investigate the appropriate techniques and strategies which can engage learners in Exploratory talk, collective thinking activities, and knowledge construction.

References


