EXPLORING DIALOGICAL AND COMPUTER-SUPPORTED COLLABORATIVE LEARNING IN THAI INTERNATIONAL EDUCATION

[1]CHARLTON BRUTON, [2]JESSESESSOMS

[1]PhD candidate, Burapha University International Graduate Studies, HRD,2 Instructor,
BuraphaUniversity International College
E-mail: [1]chart.tesol@gmail.com, [2]ajarnjesse@outlook.com

Abstract- The purpose of this research was to explore dialogic and trialogical education (Aloni, 2014: Paavola, & Hakkarainen, 2005) through the classroom experiences of teachers and Limited English Proficient (LEP) students as they engaged academic content using Freirian problem-posing (1970) combined with Computer-Supported Collaborative Learning (CSCL) at a Thai International College. The concerns were threefold: (1) To move beyond the traditional acquisition model/metaphor (AM) for interlanguage development; (2) to bridge the gap between theory and practice by using the participation metaphor (PM) and the knowledge-creation metaphor (KCM) to improve learning and development by focusing on the process of participation; and (3) to bridge the gap between learning and assessment. Two teachers as researchers, or "insiders" used an interdisciplinary approach to research including Educational Ethnography (classroom observation), Exploratory Practice (language learner based principles), and Hermeneutic Phenomenology (interpretation and meaning) to collect data during classroom activities using CSCL. Classroom activities were based on combined dialogic and trialogical principles, and Lev Vygotsky's Dynamic Assessment (DA) (1978), which joined group discussions, student blogging, and teacher scaffolding. Two classes were used to collect data; Ten (10) first year education students explored their classroom experiences, and an introduction psychology class recorded their classroom activities (writing & discussions). Results were rich in student participation and discourse production, and indicated that students were able to appropriate their own voices, and "others" while using CSCL (www.blogger.com & www.plusgoogle.com). The implications suggest that combined dialogical and trialogical education increases student participation and student-teacher intersubjectivity. LEP learners and their teachers can benefit by focusing on participation and knowledge-creation metaphors in a Computer-Supported Collaborative Learning environment.

Keywords- Dialogical, Problem-posing, Trialogical, Computer-Supported Collaborative Learning (CSCL)

I. INTRODUCTION

With the emergence of the Association of Southeast Nations (ASEAN), an influx oflimited English proficient (LEP) students are choosing international education to improve their English abilities. Many of these 'glocal', internet savvy students lack Basic Interpersonal Communication Skills (BICS), Cognitive Academic Language Proficiency (CALP), and Common Underlying Proficiency (CUP) (Cummins, 2000), but they excel at connecting using social media. At no other time in history has such an interconnected phenomenon taken place, begging education to participate. For Higher International Education, the time is right to take advantage of this phenomenon, and to create web-supported instruction that inspires *interconnected* learning. Towards this end, Daniel Goleman and Peter Senge wrote the book, *Triple Focus* which encourages a shift in education that promotes three separate but overlapping entities; the Inner, Other, and Outer, (2014). In their introduction they write the following:"Imagine this: Someone under the age of eighteen may never have known a world that didn't have the Internet… What are the tools that we might give kids today that will help them on this journey?" (Goleman &Senge, 2014: location 62).One such tool is Computer-Supported Collaborative Learning (CSCL), in which learning takes place through social interactions using computers, digitized devices, and social media (Stahl, Koschmann, &Suthers, 2006).

With computers becoming an *intrical* part of education throughout the world, there is a need for evidence to support their use in learning. The theoretical background for CSCL can be found in the socio-cultural theories of Lev Vygotsky, which encourage learning activities to be collaborative while knowledge and meaning making are co-constructed (Ibid, 2006). Vygotsky's ideas of internalization in which knowledge is constructed through cultural activities, and the *Zone of proximal development* (ZPD) in which a learner is supported by a more knowledgeable other (MKO), are of particular importance to CSCL (Ibid, 2006). In regard to second language acquisition, CSCL has roots in computer-assisted language learning (CALL), and computer-mediated communication (CMC) which are utilized throughout second language education and educational research (Atkinson, 2011: Lantolf&Poehner, 2014).

Traditionally, the field of second language acquisition (SLA) has used the acquisition metaphor (AM) to conceptualize the acquisition process which typically utilized a monological approach to teaching and learning. Such an approach downplayed the importance of dialogue and communication resulting

in student underdevelopment, and in the inability to create English communities of practice (Wegner, 1999). In such settings, LEP students remain isolated from intercultural experiences, and lack the necessary opportunities to develop the target language. But new developments in cognitive science to include *social cognition* and the use of the participation metaphor (PM) to conceptualize knowledge formation based on process (Sfard, 1998: Johnson, 2004). Because of this new conceptualization, language instruction can be improved through principled dialogical teaching (Aloni, 2014). Nimrod Aloni, an educational philosopher and author, defines dialogue as "a conversation in which those involved are attentive to one another and exhibit a mutual interest on the basis of their shared humanity and individual personalities; out of a shared sense of trust, respect and openness, they jointly advance to a more comprehensive understanding of themselves, others and the circumstances they share" (Ibid., 2).

Aloni lists five chief characteristics of educational dialogue: (1) Respect for the other by virtue of his or her humanity; (2) Interest in their personality and world by virtue of their singularity or otherness; (3) A point of departure based on mutual trust and openness; (4) Debate or exchange of ideas among the speakers that invites joint thought and a mutually beneficial exchange of ideas; (5) It aims at mutual enrichment and inspiration through the widening of the capacities to better understand one's own life, the lived-reality of the other, and the circumstances that they share (ibid., 2). Such an educational approach is what we proposed in a recent research project, suggesting that both teachers and students could develop their interlanguage development by focusing on the process of participation aided by CSCL.

Education using the PM sees teaching and learning as dialogical in which communication is used for the purpose of co-constructing knowledge. By using the PM, instructors encourage student participation which increases their ability to re(construct) their new identities (Johnson, 2014). According to Johnson, Pavlenko and Lantolf identified four critical participation stages that learners need to exhibit: (1) appropriation of others' voices; (2) the emergence of one's own new voice (often in writing); (3) translation therapy: the reconstruction of one's past; (4) continuous growth "into" new positions and subjectivities (Pavlenko and Lantolf, 2000, 162-163). Using PM, students reevaluate, reorganize, and recreate their agency and identity through their inner speech (Johnson, 2004). This process can be unnatural and confusing as students' new second language (L2) identity conflicts with their first language (L1) identity, creating personal conflict which students try to avoid.

Dialogical education is also associated with second language acquisition (SLA) inquiry and research, which framed the following research. Before SLA was an independent field, it was associated with applied linguistics that concerned the acquisition language code, and progress was assessed according to a learner's ability to master phonetics, phonology as spoken by a native speaker (Johnson, 2004: Lantolf & Poehner, 2014). These skills were identified through SLA research conducted from a Behavioral perspective, and later conducted by Cognitive-Computational approaches (Johnson, 2004). As of late, the cognitive approach has been the more dominate approach, nonetheless, there are alternative approaches that includes the dialogical which is making an impact in the SLA community (Johnson, 2004).

Under a dialogical approach SLA is judged by a learner's willingness and determination to participate in inter language communication while developing the target language and their new identity. Using this approach, researchers look at socio-cultural affects, learner's goals and intentions, and their emerging identity to become members in a new cultural community (Ibid). Marysia Johnson, an SLA researcher suggests that a dialogical approach to research be based on: "Vygotsky's socio-cultural theory (SCT), combined with Bakhtin's dialogism, as an epistemology for human sciences offers the field of second language acquisition a unique opportunity to "heal" the schism that currently separates the learner's social environment from his or her mental function (Johnson, 2004: page 170).

The dialogical approach allows the learning process to be examined from a holistic perspective, by focusing on learners' participation, and how they use new language to regulate communication, and "places mediation, either by other or self, at the core of development and use" (Atkinson, 2011: page 24). Vygotsky's theory makes it clear that higher mental processes are mediated by language, signs, and symbols (Ibid, 2011). "Like Vygotsky, Bakhtin viewed language not as an abstract system of linguistic forms, but as speech (Johnson, 2004: 121). Therefore, a dialogical approach to both research and teaching is practical in international or multi-cultural settings were interlanguages and cross-cultural dialogue are utilized. This approach allows instructors to focus on the process, and make adjustments leading to better outcomes. If instructors are able to focus on the dialogical process they can help students identify their weaknesses, and become better self-directed learners.

Moreover, there is another conceptualization that is advancing the field of SLA; the knowledge creation metaphor (KCM) which is an emergent epistemological, or trialogical approach to learning (Paavola, &Hakkarainen, 2005). In trialogical learning, knowledge is constructed through a

mediated process with objects of activity and collaboration (Ibid, 2005). According to Paavola &Hakkarainen, the knowledge-creation metaphor has roots in Bereiter's knowledge building, Engeström's expansive learning, and Nonaka and Takeuchi's organizational knowledge-creation (2005). The KCM can be applied through the use of Computer-Supported Collaborative Learning (CSCL).

Another aspect utilized in this research is Dynamic Assessment (DA) and the relationship between classroom instruction and assessment. As with many western concepts, in regard to assessment there is a dichotomy that divides instruction and assessment which may not be necessary. This can mean "that assessment–understanding learners' abilities– and instruction–supporting learner development– are a dialectically integrated activity" which can bring instruction and assessment closer together (Poehner, 2008: location 134). Dynamic assessment can accomplished when using Vygotsky's *Zone of Proximal Development* (ZPD), or the level of performance that students can reach on their own and the level they can reach with someone's assistance (Ibid, 2008).

Table 1: 3 Knowledge Metaphors

Three knowledge metaphors	Main Focus	Examples
Knowledge Acquisition (AM) MonologicalTeaching	Adopting or constructing subject-matter knowledge and mental representations	Personal reflection, Emergence of one's own voice, Reconstruct one's past
Participation (PM) Dialogical Teaching	A process of participating in social communities	Respect for others;Interest in their personalities ; Mutual trust; Exchange of ideas;
Knowledge Creation (KCM) Trialogical Teaching	The process of creating and developing new material and conceptual artifacts.	Blogs and Google Plus

II. METHODLOGY

Practitioner or teacher classroom research is no longer seen as superfluous, but as a necessity. Whether Ethnography, Action Research, or Hermeneutic Phenomenology, teacher research is becoming an expectation in higher education for both classroom improvement and professional development (Walford, 2008; Moustakas, 1994). In the following research Ethnography was used to observe class culture by observing student interaction. It was important to watch how students both socialize and learn in a second language. It has been our experience over the past five years that LEP students with the same native language avoid using the target language with each other, and with the native speaking instructor. It becomes apparent through observation that LEP students learn the academic content in their native language, or they don't learn the content at all.

While observation may answer some questions, it is imperative that teachers allow students to explore their own experiences, and write about them. Many LEP students have been studying the target language (English) for years, but they haven't had the opportunity to use English in social settings, which then makes learning in English much more difficult (Cummins, 2000). Many of these students aren't sure how a language is acquired and continue to use a monological approach to study the*foreign* language, but seldom if ever socialize using the target language. Hermeneutic phenomenology can be used for students to explore their "lived experiences" while socializing and learning in a second language.

Following are the steps we used to conduct our phenomenological study as outlined by von Eckartsberg; (1) The problem and question formulation; (2) the data generating situation; and, (3) data analysis (Moustakas, 1994, p16). While the students' experiences were mainly used as a developmental tool forstudents own critical reflection, we believed the data could also be used to improve classroom instruction.

Finally, concerning the methodology, in support of this teacher practitioner research, certain guiding principles were used from Dick Allwright's Exploratory Practice: (1) Put quality of life first. (2) Work primarily to understand classroom life which aims to solve problems. (3) Involve everybody (i.e., learners are co-researchers). (4) Work to bring people together (atmosphere of collegiality). (5) Work for mutual development. (6) Integrate the work for understanding into classroom practice. (7) Make the work a continuous enterprise (Allwright& Bailey, 1991).

2.1. The Problem and Question Formulation

As mentioned above, LEP students are confronted with numerous difficult learning conditions that they may not be prepared for, but only students themselves are aware of their intentions and preparedness. Moreover, these difficulties center on their lived experiences, and how they experience socializing and learning in a second language. With this in mind, questions were formulated to explore student and teacher experiences as they learned in the classroom which included the following: (1) what are the typical classroom experiences of students and teachers

regarding interlanguage education? (2) What are the classroom experiences using dialogical teaching (problem-posing, and trialogical teaching (CSCL)? And, (3) How can using a participation metaphor improve classroom instruction?

2.2. The Data Generating Situation

Three classrooms were used to collect data that would aid in answering the research questions. Two were introduction academic writing courses, and the other was an introduction to psychology course. Most of these LEP students had studied in Thailand their entire livesbut had few experiences using English, and we were curious to learn about their initial experiences using English to both socialize and learn. Therefore, to answer the first research question students were asked to write an end of term essay on what it was like that term to socialize and learn using English.

The second question was answered by the introduction psychology class with 40 students who weregiven instruction using dialogical teaching in the form of Freireanproblem-posing for the first time. These students, business majors were of mixed levels and gender but with a majority of LEP learners. We again wanted to hear directly from the studentswho had been given problem-posing instruction which was introduced by the Brazilian Educator, Paulo Freire (1970). Since then a number of English as Second Language (ESL) instructors have used the model to improve their classroom instruction (Wallerstein, 1987: Schleppegrell& Bowman, 1995). Freire begins with the notion that typical authoritative instruction, or what he referred to as "banking instruction" lacks consciousness-raising, which is what teachers should be striving for in their students (Freire, 1970).

According to Schleppegrell& Bowman, in regard to problem-posing; "[t]his process enables teachers to renew and supplement curriculum outlines with language activities that develop students' English language skills as they address interesting and meaningful issues (Ibid, 1995). In problem-posing, typically a five step process is used, and can be used for any number of curriculums from business to communication. During this process students were given a "prompt" to help the instructor introduce the content. Then students were asked to respond in writing to the following questions: (1) describe what you see in the prompt; (2) what issues or problems can be identified? (3) Can you relate this to your life? (4) How does society and culture play a part? (5) Can you identify possible solutions to these issues or problems?

In this research students were given a prompt, in this instance a photo that represented the content or theme the instructor wished to cover. In this psychology class, students were being introduced to the concept of "giving advice". The photo showed two college aged women in deep conversation. Students first described the scene using basic English, and with each additional step the difficulty increased. In the next step students identified the issues as they related to "giving advice". The third step asked students to consider "giving advice" in their own lives. This was followed by students to considering the effects of society and culture when "giving advice". And finally, students came up with possible solutions when "giving advice".

During the pair work and group discussions that followed, it was noticed that although the students explored the promptin detailed writing, they were still hesitant to express their views in group discussions. Because of this, students were then asked to upload their writings to their personal blog (www.blogger.com), and share within their groups using Google plus (www.plusgoogle.com). Students then reviewed each other's blogs via google plus, and left comments. In some cases dialogues online followed. During the next class session students then re-engaged the material.

For the LEP students, the additional step encompassed trialogical teachingby adding Computer-Supported Collaborative Learning (CSCL) to assist the internet savvy LEP students who were not able to collect their thoughts in writing, or participate in the group discussions. Only students along with the instructor could access the writings, and leave comments. In some cases, classroom recorded discussions were uploaded as additional support.

Students were then asked to discuss their writings in small and large group settings. This was then followed by small group interviews with the instructor. During the teacher interviews, Vygotsky's ZPD guided the dynamic assessment (DA) (Poehner, 2008),which was used by the instructor to listen, challenge, scaffold, and quantify student responses during the "follow-up" interview. In Vygotsky's ZPD, instructors determine students understanding and potential development through dialogue, and lead students to a more comprehensive understanding of the material.

From these experiences we asked students to complete a survey/questionnaire that would quantify and qualify their experiences using a Likert scale and free writing. Students responded to the following statements: (1) Trialogical teaching helped me with interpersonal skills; (2) Trialogical teaching helped me better understand the concepts; (3) Trialogical teaching helped me participate in group discussions; and (4) Trialogical teaching motivated me to participate.

The final research question was answered by the instructors who combined the classroom observations, the dynamic assessment, student feedback, and critical reflection to improve the classroom activity for the remainder of the semester. In this case, the instructors were looking at the process, the level of student participation in the various activities; individual, pair-groupings, group discussions, and the Dynamic Assessment interviews.

2.3. The Data Analysis

To analyze the writing samples of the phenomenological data a modification of Van Kaam's method, introduced by Moustakas was used: (1) Listing and Preliminary groupings; (2) Reduction and Elimination; (3) Clustering and Thematizing the Invariant constituents; (4) Final identification of the Invariant constituents (Moustakas, 1994). Ricoeur's four criteria were also used as protocols: (1) a fixation on meaning; (2) dissociation at some point from the mental intention of the writer; (3) a gestalt approach to interpretation; (4) the potential for multiple interpretation (Moustakas, 1994, p10). Also the hermeneutic circle was used for textual interpretations from students' feedback (Moustakas, 1994).

III. RESULTS AND DISCUSSION

3.1. Student Experiences

Our initial interest was to move beyond the acquisition metaphor in which students were static and uninvolved, to a participation metaphor that focused more on the process of learning. First, to better understand student participation, we asked approximately 100 students in two Academic writing courses to write an essay describing their socializing and learning experiences while in college that term. The results were what we expected, and from our phenomenological analysis we identified three main themes; (1) Students main focus on grades; (2) their fear of speaking in a second language; and (3) the importance of speaking English in the future. In table 2, we demonstrate the phenomenological theme as a random example.

Table 2: Themes from Student writings

Phenomenological Themes	Random Student Writings
Emphasis on study	*It is very difficult to social in English, but if you study hard it won't be hard for you.*
Student fear of making mistakes	*English is hard. The pronunciation is hard too. And grammar is the hardest thing. I don't want to make a mistake, and I have fear to make mistake*
The importance of speaking English in the future.	*I think the person who knows English has advantage over the person who doesn't knows. But I also think learning and socializing in English is difficult.*

From a number of student writings, we discovered that students' fear of making mistakes was directly related to their grades. Many felt that making mistakes was a negative reflection on themselves, and would affect their grade point average. This concern with grades was greatly affecting their levels of participation.

3.2. Student Participation

To answer the second research question, students were instructed using problem-posing in which business students in an introduction psychology class were taken through the process (Table 3). The theme of the lesson was "giving advice".

Table 3: Problem-posing example (1 student)

Problem-posing "Giving advice"	Random Student Example
Describe what you see…	In my opinion the photo shows one of the women have something that make she serious, and one woman listen.
What are some issues related to this setting?	Maybe the woman have a problem with family, friends, boyfriend, or other problem that happened with she.
Relate this setting to your own experiences…	I have this problem before, and my friend she talk with me, and help me to be happy again.
How are "society" and "culture" related to this setting?	When people have the problem they don't want other people to know, so it make them serious, and make them not think the best solution.
Can you offer any suggestions or solutions to this problem?	In my opinion I think if want to solve this problem should start to solve from causes and think how to get the best solution for this problem.

Following the entire process, which included support from CSCL and Dynamic Assessment, students were asked to complete a survey/questionnaire. Forty students answered the survey/questionnaire which asked students to quantify and qualify their experiences to the following statements: (1) Trialogical teaching helped me with interpersonal skills, to which 90% responded favorably; (2) Trialogical teaching helped me better understand the

concepts, to which 88% responded favorably; (3) Trialogical teaching helped me participate in group discussions, to which 73% responded favorably; and, (4) Trialogical teaching motivated me to participate, to which 93% responded favorably. Although we did not place much weight on the questionnaires:

Table 4: Survey of problem-posing (40 students)

Trialogical Teaching (Problem-posing & CSCL)	Positive Responses
Trialogical teaching helped me with interpersonal skills	90%
Trialogical teaching helped me better understand the concepts	88%
Trialogical teaching helped me participate in group discussions	73%
Trialogical teaching motivated me to participate	93%

3.3. Teacher Observations

To answer our final research question, the instructors combined data from student experiences and their participation to uncover themes that could be used to improve classroom instruction. Our Thai students considered themselves highly motivated, but there motivation was directed mainly towards their grades. Their motivation for studying English was based on their future employment, not associated with making intercultural connections. Few students were concerned with making international friends, even though they knew this would help their English skills.

CONCLUSIONS

Essentially, many limited English proficient students throughout ASEAN are preparing for their futures by choosing International colleges to further their English language skills. Nonetheless, many of these limited English proficient (LEP) students, and their instructors associate language acquisition in accordance with monological teaching, conceptualized using the acquisition metaphor (AM). Many of these students fear making mistakes, and overcompensate by focusing on getting good grades at the expense of participating in authentic dialogue that will eventually improve their language acquisition.

Instructors can transform their classrooms, and help their internet savvy students by adopting three main principles: (1) Conceptualize language acquisition using the participation metaphor (PM); (2) combine dialogical teaching strategies with Computer-Supported Collaborative Learning (CSCL) as Trialogical teaching (Paavola, &Hakkarainen, 2005); and (3) use Dynamic Assessment (DA) (Poehner, 2008). Conceptualizing language acquisition using PM will allow students and instructors to focus on the process of becoming a participant. This in turn will help in forming communities of (interlanguage) practice (Wenger, 1999). By using trialogical teaching, LEP internet savvy students will be able to participate in socializing and academic learning while instructors bridge the gap between theory and practice. And finally, by using Dynamic Assessment, students can be evaluated on their willingness to participate, receive crucial support from more knowledgeable others (MKO) that will encourage language development, and help bridge the gap between learning and assessment (Poehner, 2008).

REFERENCES

[1] Allwright, D., & Bailey, K. M. (1991). Focus on the language classroom: An introduction to classroom research for language teachers. Cambridge University Press.

[2] Atkinson, D. (Ed.). (2011). Alternative approaches to second language acquisition. Taylor & Francis.

[3] Auerbach, E. R., & Wallerstein, N. (1987). English for the workplace: ESL for action: problem posing at work. Addison-Wesley.

[4] Cummins, J. (2000). Language, power, and pedagogy: Bilingual children in the crossfire (Vol. 23). Multilingual Matters.

[5] Freire, P. (1970/2000). Pedagogy of the oppressed. Bloomsbury Publishing.

[6] Goleman, D., &Senge, P. (2014). The triple focus: A new approach to education. Florence, MA: More Than Sound., Religion News Service.

[7] Johnson, M. (2008). A philosophy of second language acquisition. Yale University Press.

[8] Lantolf, J. P., & Poehner, M. E. (2014). Sociocultural theory and the pedagogical imperative in L2 education: Vygotskian praxis and the research/practice divide. Routledge.

[9] Moustakas, C. (1994). Phenomenological research methods. Sage Publications.

[10] Paavola, S., &Hakkarainen, K. (2005). The knowledge creation metaphor–An emergent epistemological approach to learning. Science & Education, 14(6), 535-557.

[11] Paavola, S., Lipponen, L., &Hakkarainen, K.: 2002, 'Epistemological Foundations for CSCL: A Comparison of Three Models of Innovative Knowledge Communities', Available: http://newmedia.colorado.edu/cscl/228.html

[12] Pavlenko, A., &Lantolf, J. P. (2000). Second language learning as participation and the (re) construction of selves. Sociocultural theory and second language learning, 155-177.

[13] Poehner, M. E. (2008). Dynamic assessment: A Vygotskian approach to understanding and promoting L2 development (Vol. 9). Springer Science & Business Media.

[14] Schleppegrell, M. J., & Bowman, B. (1995). Problem-posing: A tool for curriculum renewal. ELT Journal, 49(4), 297-306.

[15] Sfard, A. (1998). On two metaphors for learning and the dangers of choosing just one. Educational researcher, 27(2), 4-13.

[16] Stahl, G., Koschmann, T., &Suthers, D. (2006). Computer-supported collaborative learning: An historical perspective. Cambridge handbook of the learning sciences, 2006, 409-426.

[17] Vygotsky, L. S. (1978). Mind in society: The development of higher psychological processes. Harvard university press.

[18] Walford, G. (Ed.). (2008). How to do educational ethnography. Tufnell Press.
[19] Wenger, E. (1999). Communities of practice: Learning, meaning, and identity. Cambridge university press.

★★★