Learning English Through Inquiry: An Acquired Experience in Three Public Settings in Colombia

Claudia Janneth Parada Moreno

Universidad Pedagógica y Tecnológica de Colombia

janneth1004@hotmail.com.

The main purpose of this qualitative case study project is to share the experience I have gained by means of the implementation of an inquiry-based approach for the teaching English in three different settings in Boyacá, Colombia, during the years 2005, 2006, and 2007. Inquiry-based learning was developed through the Authoring Cycle Method. The inquiry projects took place in a rural school at Pijaos – Cucaita with sixth graders, at a city school in Santa Cruz de Motavita with tenth graders, and at the UPTC with students in different academic programs who took English III. The objective of my research project was to describe how students related their inquiries in the English language to their programs from a personal and social dimension.

Key words: Inquiry, critical pedagogy, authoring cycle, socio-constructivism

El principal propósito de este estudio de caso es compartir la experiencia de una investigación basada en la implementación de un enfoque investigativo para la enseñanza del inglés. Este estudio se llevó a cabo en tres lugares diferentes en Boyacá – Colombia durante los años 2005, 2006 y 2007. El aprendizaje basado en la investigación se desarrolló a través del método *ciclo de autoría*. El proyecto de investigación tomó lugar en una escuela rural en Piajos del municipio de Cucaita con alumnos de sexto grado, en el colegio Santa Cruz de Motavita con alumnos de décimo grado, y en la Universidad Pedagógica y Tecnológica de Colombia con estudiantes de diferentes programas académicos, quienes cursaron Inglés III. El objetivo de mi proyecto investigativo fue describir la forma como los estudiantes relacionaron sus inquietudes en inglés con sus programas académicos desde una dimensión personal y social.

Palabras clave: Cuestionamiento, pedagogía crítica, ciclo de autoría, socio-constructivismo

Introduction

One of our roles as English teachers is to reflect on our pedagogical experience in the classroom since many times we do not find the answer to support students in solving their difficulties for learning English or other subjects. This trouble might be related to multiple factors that affect the teaching-learning process. One of these

factors is associated with the idea that each human being has been designed with particular physical and psychological characteristics which frame an interesting world plenty of diverse perceptions around it. Through my experience as an English teacher, I have noticed the need to implement a methodology that engages students in meaningful learning, so that they can participate actively in acquiring the English language taking into account their interests, attitudes, expectations, abilities, reflections, needs, and so on. I mean that students must be conceived as individuals and social beings able to build their lives and become a useful part of the community. Moreover, I have always sought to do my job as a transcendental activity; that is, to go beyond instructional classes.

Bearing in mind this concern, I began to explore some theories, approaches, and methods to improve my training as an English teacher. I became acquainted with the inquiry-based approach during a seminar with one of my professors of the master's program in language teaching. This approach has fulfilled some of my expectations in relation to the aspects I mentioned in previous lines that affect my students' learning of English. I decided to implement this approach as a methodological proposal for my research project. The research question that guided my study was, What connections do a group of ESP UPTC students make between their English inquiry projects and their personal and social perspective?

I implemented the project in three settings because I continuously changed my work place. However, I consider it important to share these experiences since each one of them is different, and in the three contexts the study seemed to have a high impact on both students and teacher. The project was completely developed in the last setting with ESP students from UPTC. The article will continue discussing the theoretical framework with the main tenets of the inquiry-based approach, critical pedagogy and the socio-constructivist theory; a short description of the participants and settings; a summary of the experiences taking into account the stages of the authoring cycle method, the findings of this research project and finally, the conclusions and pedagogical implications for the implementation of this approach.

Review of Literature

I include social constructivism as a philosophy for whole project; critical pedagogy as support for developing inquiry and the main principles and requirements of the inquiry-based approach as my pedagogical proposal for English teaching and learning.

Inquiry an Alternative to Applying
the Socio-Constructivist Theory

Some theorists like Vygotsky (1978) and Bruner (1990) claim that knowledge is socially constructed, and inquiry is an activity that involves team work, collaborative dialogue, and a dialogic curriculum; these reasons lead me to consider the main principles of the social-constructivist philosophy. The main author of this theory is Vygotsky (1978). He considers that the construction of knowledge takes place when subjects interact with objects, when subjects carry out this interaction with other people, and when this interaction is meaningful for the subjects. The following quotations give us a better understanding of socio-constructivism and inquiry. Wells (1995, p. 233) claims that "a social constructivist theory of learning and teaching enacted through an inquiry-oriented curriculum would serve the two goals of education: transmission of knowledge and skills to students and fostering students' individual potential and creativity". He suggests "the most effective learning takes place when the learner is faced with a question or problem arising from an inquiry to which he or she is committed". He believes that because learning and teaching are social endeavors, knowledge is constructed not within, but between individuals. Well's ideas suggest the co-construction of knowledge through collaboration in the classroom. Collaboration in the construction of meanings implies sharing personal experiences that bring together community and school.

Linking Socio Constructivism,
Language and Identity Formation

Developing the socio-constructivist theory as the philosophy behind my research project also implies talking about the consequences it can generate. When students inquire using the English language, they are exploring a new culture and at the same time comparing their identity. Socio constructivism focuses on interaction between participants, interchange of knowledge, ideas, understandings, thoughts, feelings, and beliefs. In this process the ways in which identities are built, rebuilt, and dismantled over time emerge and are distinguished between "thick" and "thin" ethnicity built upon shared interests, shared institutions, and shared culture. A Socio constructivist approach centers on interactions between circumstances and groups because one thing is what others say we are and another thing is what we say we are. Foreign language and culture education provides a space for reflecting on the ways in

which knowledge and culture are constructed according to contingent and transitory historical constraints. Studying two or more realities where culture and political articulations were accomplished differently, allow raising awareness of the limits of traditions on both sides and provide some grounds for critical cultural revitalization, transgression, creativity, and imagination. As McLaren (2003) proposes, we can find contradictions in these realities or worlds. Moreover, these realities allow learners and teachers to interrogate dominant and subordinate ideologies, to give voice to discourses that have been silenced, and to make connections perhaps between different narratives at local and global levels through literature, movies, music, or fashion.

Seeking these kinds of contradictions enhances learners' knowledge beginning with students' background acquired in the context through interactions with peers, teachers, experts, community, mass media, knowledge systems, and sign systems; students increase their understanding, they interchange and negotiate meaning by means of democratic environments. These are ideal conditions for encouraging settings of critical pedagogy.

The Meaning of Critical Pedagogy Upon Inquiry

I would like to mention some critical pedagogues and their theories in order to contextualize the reader with the main tenets of critical pedagogy. Burbules and Berk (1999) stress that critical pedagogy is an effort to work within educational institutions and the media to raise questions about the inequalities of power, about the false myths of opportunity and merit for many students, and about the way belief systems become internalized to the point that individuals and groups abandon the very aspiration to question or change their lot in life. One evident example of this reflection is related to the students who become less prone to ask questions as they move through the grade levels. Children from birth observe faces, they grasp objects, and they put things in their mouths. The process of inquiring begins with gathering information through applying the human senses - seeing, sound, touch, taste and smell. When children arrive at the school, they learn to listen and repeat the expected answers. Who silenced their voices? To answer this question, the teachers need to review the methodological and pedagogical procedures and try to involve students in their own learning by means of the creation of environments that allow them to participate actively in the building of questions, to solve doubts, and to discuss problems. As Freire (1985) argues, inquirers need to be problem posers, not just

problem solvers; our students become problem solvers of our questions. Teachers must realize that problem solving and research are empty processes when the question is not one that matters in the life of the inquirer.

Goldstein (1997) talks about the ways that language researchers interested in notions from the field of critical pedagogy focus the language use and language learning in interactions with social dimensions such as class, ethnicity, gender and race to reproduce inequities both inside and outside school. We critical educators look at language use as something more than a psycholinguistic phenomenon. There is another critical theorist who helps us to understand with a metaphoric figure the kinds of education that teachers have available. Freire (1970) proposes two types of education: banking and libertarian. Banking education involves the act of depositing information. The student is an empty depository and the teacher is a depositor. The students receive, memorize and repeat the same information. There is no real communication. The role of the student is a passive one, of a sort of disengaged brain. On the other hand, in libertarian education the teacher and students are partners. Meaning is inherent in communication. Through it students are involved in acts of cognition and are not simply empty heads waiting to be filled with information. The process is a dialectical one. Sometimes the teacher is a student and the students are teachers in a dialogue through which all individuals can benefit. This cooperative relationship leads to meaningful interaction about some content of interest.

I have chosen libertarian education and my pedagogical proposal is based on it. Freire (1970) defines it as a dialectical process. I understand it as an education based on a dialogue which has two or more positions, even contradictions, and for my research project this dialectical process tries to support my participants' learning from their individual and social dimension. I am going to quote another critical pedagogue, McLaren (2003, p. 193), who sheds more light on this dialectical dimension. He recognizes the deficiencies of society such as poverty, discrimination, inequity of power, lack of opportunities, corruption, and so on. These are more than simply isolated events of individuals or problems in the social structure; rather, these problems are part of the interactive context between individuals and society. The individual, a social actor, both creates and is created by the social universe of which he/she is a part. Individual and society are interwoven, so that reference to one must by implication mean reference to the other. Dialectical thinking helps us focus simultaneously on both sides of a social contradiction. Because of this, education must be led in an integral way.

The Road for Implementing Inquiry Based on Critical Pedagogy

Giroux (1983) talks about productive knowledge (similar to Habermas' technical knowledge) and directive knowledge (similar to Habermas' emancipatory knowledge). He recasts classroom objectives into the categories of macro and micro for teachers design the kind of education that they want for their students. Macro objectives are designed to enable students to make connections between the methods, content, and structure of a course and its significance within the larger social reality. This dialectical approach to classroom objectives allows students to acquire a broad frame of reference of worldview; that is to say, the acquisition of knowledge for applying it in their contexts. Macro objectives center on the relationship between means and ends, between specific events and their wide social and political implications; developing macro objectives foster a dialectical mode of inquiry; the process constitutes a sociopolitical application of knowledge, what Giroux calls directive knowledge. Students and teachers have to seek the social function of particular forms of knowledge in order to provide a model that permits examination of the underlying political, social, and economic foundations of students' contexts. I have mentioned and related this function of the teacher in the socio-constructivist theory with regard to identity formation.

Micro objectives represent the course content. These objectives are concerned with the organization, classification, mastery and manipulation of data. These are characterized by their narrowness of purpose and their content-bound path of inquiry. This is what Giroux (1983) calls productive knowledge. However, teachers can use micro objectives to determine the purposes of English language learning; for example, grammar, development of language skills (reading, listening, speaking, and writing), students' performance and so on. Once more Giroux (1988) and other authors like Kubow (1999) and McDowell (1996) present four types of languages for consideration in the classroom. These languages are the language of possibility, language of critique, language of action, and language of transition. How do these languages work with inquiry? Language of critique is applied in inquiry. When students are questioning different issues in order to find their inquiry questions, they have to analyze their concerns and desires for solving a particular problem. Then, students gather enough information about their inquiry issue and emit a judgment and select the most pertinent information for their inquiry project; as such, students are developing their critical competence. My students used the language of possibility

when they interchanged knowledge, points of views, information with their partners or a more capable person; they found the path for solving their inquiry question or to expand their understandings. The language of action was developed in the inquiry process when students decided what their theory was and what their arguments were. Students show this language when they present their written and oral reports. The language of transition was represented in conjunction with students' proposals for improving or solving their inquiry issue.

The Power of Inquiry-Based Education

(Concept to Classroom, 2004). An inquiry approach is defined as seeking truth, information or knowledge. Inquiry implies involving students in a learning process that leads them to understand the acquired knowledge. Involvement in learning means to possess skills and attitudes to seek solutions to questions and issues while you construct new knowledge. Memorizing facts and information is not the most important skill in today's world. Facts change and information is readily available. What is needed is an understanding of how to get and make sense of the use of mass of data available in our current world and the world where individuals live, learn, communicate and work.

Stages of Inquiry

These stages are proposed by Sheingold (1987). These steps summarize the principal activities in an inquiry process. They are related to the authoring cycle method which will be described in the instructional design. This process includes the following stages: Formulating a problem or question, searching through and collecting information to address the problem or question, making sense of the information, developing an understanding of a point of view about the issue for inquiring or answering inquiry questions, and sharing their findings with real audiences.

Requirements for Inquiry Based Learning

The development of this approach requires sources of knowledge. Short (1993) includes three forms which are known in the school or university; these sources are worked in a different form within the inquiry cycle. These sources are personal and social knowledge, knowledge systems, sign systems, and democratic education.

Methodology

Authoring Cycle Method

The process of the authoring cycle method is proposed by Short and Burke (1991). It will be explained and described through the process followed by ESP students from UPTC.

1. **Building from the known.** I consider this stage as the most relevant for developing the inquiry project. It allows us to determine several factors like academic level, social and cultural background, initial students' concerns and interests, the purpose for learning English, among others. Teachers can use different activities, resources, and enough time because these engagements highlight personal and social background as the heart of inquiry. The first activity planned was to get to know each other, to establish some relationships, to present students my research project by means of a survey. I noticed some habits for learning English in the students: at the beginning of the course they maintained a passive attitude, they waited for my explanation, they were highly dependent individuals, and they did not interact among themselves in an active way.

   Once they finished the previous activity, I suggested they form groups. Most of the students formed groups with their academic program partners, others worked alone and others worked out of empathy. During the second week, groups worked in class; they interchanged and updated personal and academic information. They tried to select the theme for inquiring and some questions started to emerge. Along the authoring cycle method my role was always as teacher-researcher; at that moment my role was as a researcher. I led them toward their research questions providing them with some guidelines.

2. **Taking time to find questions for inquiry.** It is the time for students to wonder and explore a topic from as many different perspectives as possible; all kind of ideas are proposed. There must be consensus among the members of the group in order to accomplish two of the principles of inquiry-based approach: self-regulation and self-mediation. Students must listen to their partners and must be heard until an agreement is reached. This stage was developed over four weeks, eight hours. The first two weeks

were assigned to refine research questions, objectives and justification. The other two weeks, students were searching for all kinds of information related to their theme for inquiring.

At the beginning of the class, the teacher and students talked about the previous cycle stage and the tasks and objectives of the current class. Then, students formed the groups. Before defining their own question, students had to answer these questions: What do you want to know about the theme? What do you know about the theme? What do you need to know about this institution? This process was completed with all groups and students who worked alone. In the next step, my role was as an English teacher. I guided students in the design of an inquiry question in English. Some of the groups were able to write the questions and other groups required my help. Students asked for technical vocabulary, structures or proper names. As the groups were establishing their inquiry, they began with objectives and justification. Students wrote first in Spanish and then they wrote their ideas in English.

3. **Gaining new perspectives.** A way to obtain new perspectives is through interaction with others. Students could express their points of view and perspectives related to the specific knowledge of their academic programs. Most of the students worked on projects that they were developing in specific subjects of their academic programs. They had knowledge acquired through the reading of literature. Some students were gathering data of primary sources such as interviews, questionnaires, surveys, and direct observation. Other groups designed English inquiry projects based on their short experience as practice teachers and some students wanted to discover the real situation of the inquiry issue. With this preliminary information I decided to develop the first English oral report within the authoring cycle. I knew from my experiencing all kind of feelings that a speaking activity was generating and some of the students told me that. For me, it was a challenge because this experience was like my angular stone: it would show the impact of my proposal on all students, and I had many expectations such as the quality of the projects, the English level, and the more able students' reaction to the English pronunciation of the less able students in regard to the capacity of understanding each other. During their explanations most of the students read. When they did not find the appropriate word they talked in

Spanish. When they made mistakes they tried to use self-correction or their classmates helped them. While the group was explaining their purposes, other groups were worried preparing their explanation, so I had to open a general discussion about each proposal. Students participated in an active manner; they were respectful, and posed some questions for their classmates. The discussion ended in Spanish because all students wanted to participate; students asked me for permission to speak Spanish. Along the round table discussion I tried to correct the most frequent pronunciation errors, although I avoided intervening.

I spent two weeks of English classes, which means a total of eight hours: two hours preparing the explanations, four hours for the explanations, and two hours looking for more information in order to begin complementing and expanding the literature review. I also brought students some tutorials. My role was as an English teacher and a researcher at the same time. I helped them with pronunciation, grammar correction about structures, technical vocabulary, and function of the words. During tutorials I led them to define the suitable inquiry question, the writing up, and helped with the design of the presentation.

4. **Attending to difference.** The purposes of this stage were to reflect, compare, and rebuild their work on inquiry projects. The previous stage had a great impact on students. English presentations were a new experience for them and it brought the space and conditions for eliminating a lot of fears and learning new abilities. The work developed in this stage was based on finding problems in the research questions, in the objectives, or adjusting the justification. After that, we began to explore and analyze the information gathered and, as a second step, I provided students with some guiding questions that helped them to select and classify the more pertinent literature related to their inquiry themes. These were the questions: How is this information relevant for our project? How does it relate to what we know? What parts support our proposal? The time spent was about three or four weeks. Students brought resources to the class, they read, they found the main ideas and inferred information through scanning and skimming reading processes. Other groups did not use so much literature because their inquiry project was based on collecting data; the time was spent in designing the instruments.

My role was as an English teacher when students had to interpret gathered information. For example, students looked up unknown words or technical words in the dictionary and focused their attention on the first meaning that appeared in the dictionary. Sometimes this meaning changed the sense of the text; we had to use technical dictionaries for getting appropriate meaning according to the context. Students taught me several technical terms, so, we learnt together. My role as researcher was to lead them to find the information that supported their projects, taking into account the research questions and their objectives. I helped them to assess the applicability of the information; I explained the relevance to consult more than one source in order to get more perspectives and points of view for avoiding biased information. Finally, students as authors of their projects took what they considered pertinent to support their study theoretically.

5. **Sharing what was learned.** The objective of this step was not really to state the answer to the research question, but to guide students to tell others how they arrived at this answer or understanding. For presentations, students used video-beam, posters, collages, shows, experiences or products; students needed to make public what they knew and understood their inquiry. Through students' inquiry for English projects explanations, they transformed what they and others knew about the inquiry issue. During the "gaining new perspectives" stage, students shared their intentions for the research projects. Their classmates had a general idea about each project, but one thing was to present students' expectations through the research question, objectives, and justification: it was theory, something abstract. Another thing was to present the development of the English inquiry project, it was practice: something more real. This was the second opportunity for speaking English and most of the students wanted to give a better performance. The production of the oral report for the final explanation took five weeks on average. Students spent 15 minutes and ten minutes for comments and suggestions which comprised the evaluation of the research projects. Some groups took more time.

6. **Planning new inquiries**. This stage reflects what learners know (content), how they came to know (process) and why they inquired (purpose, goals). They can go beyond the immediate experience to broader meanings for

their lives. This goal must be the main objective of their education; students must learn for life and not for the moment. This moment reflects the philosophy of the institutions, teachers, and learners, as well as the intention of my research project: to obtain a transformation of the individuals through knowledge and the application of it in their communities, society and country. The way to recognize these purposes requires individual and collective reflective time.

The Inquiry Experience with Children and Teenagers

Regarding my first two experiences in Pijaos School and Motavita, I would share only some reflections about them because I could not finish the inquiry cycle in those contexts. Each one is a different experience. Pijaos School is a rural context. I worked with sixth; they were children and it was my first experience with the inquiry-based approach. These students were quite shy, passive, perceptive, and dependent on the group and the teacher. I had to propose the topic for inquiring "The Flowers of Pijaos" because these children used to be receptive. The first activity was a field trip. They were interested; they posed many questions related to English words, they had the chance to interact with the community, and students could establish connections with their prior knowledge. Next class students formed groups according to the classification of flowers: Ornamental, medicinal, and commercial. I invited them to write all the questions that they wanted answers to about flowers. A lot of questions emerged; this population displayed creativity and curiosity, two important characteristics for doing an inquiry project. I was working with biology, chemistry, and technology teachers. We wanted to design a cross-curricular project; unfortunately, I could not continue working there.

Motavita School was a difficult experience. My students were teenagers in tenth grade. The school context was hard as students had disciplinary problems. I noticed a lack of control of teachers and administrators; besides students had many affective, family, economic, and psychological troubles. At the beginning it was discouraging to me, I did not find the way to start with the project. I brought them diverse activities in order to get them motivated. Eventually I assumed it as a challenge.

In the second semester of 2006, I wrote a personal profile of each one for knowing their reaction, and they wrote the answer. This activity was useful because I could prove the importance of establishing good rapport with students as McCombs and Whisler (1997) say: "All students appreciate personal attention from the

teacher…'' Through this exercise students and teacher established a better relationship, and the information allowed me to design a group profile where I determined their concerns, interests, perceptions, and expectations. These are some of the outcomes: most of the students were worried about their future, they wanted to continue their studies, and most of them wanted to improve their quality of life. The main problem was that they did not know what their attitudes, abilities, and requirements for choosing a life project should be. Finally I got their confidence and we could define four themes for the project: English music, academic relationships, agricultural projects, and being a professional.

Research Design

I classified this research project as a qualitative-descriptive case study. According to Patton (1985), qualitative research "is an effort to understand situations in their uniqueness as part of a particular context and the interactions there. This understanding is an end in itself, so that it is not attempting to predict what necessarily may happen in the future, but to understand the nature of that setting." Developing qualitative research means to study a particular phenomenon because each context and population have specific characteristics as happened in my experience implementing an inquiry-based approach. I have defined my study as a case study; the reasons are based on some authors who describe the essential qualities of this type: Yin (1984) defines case study as an empirical inquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident. Merriam (1988) says that qualitative case study is an intense holistic description and analysis of a single instance, phenomenon, or social unit.

My research project is a descriptive case study because it is a rich description of the phenomenon under study. In my situation the unit of study is a group of ESP students developing an inquiry project. A descriptive case study shows the influence of personalities on the issue. The intention of this study is to know the connections that ESP students make between their inquiries and their personal and social life. The instruments I used for collecting data included reflective journals. Yinger and Clark (1981) stress that "writing can provide a way to process memories more deeply through an interaction between concept development and symbolic expression." I also used semi-structured interviews, as Patton (1990, p. 278) explains: "we interview people to find out from them those things we cannot directly observe…we cannot

observe feelings, thoughts, and intentions. We cannot observe behaviors that took place some previous point in time…We have to ask people questions about those things". The third instrument was students' artifacts, as tangible evidence of what students were able to do.

Description of the Participants and Setting

I chose non-probability sampling or purposeful sampling (Patton 1990) taking as criteria the information that I required for answering my research question. Random sampling was my strategy for choosing the participants of this study. I assigned them nicknames or pseudonyms to protect their real identity. The business administration group was composed of two men and one woman; they are from 20 to 24 years old, and were in fifth and sixth semester. Garfield was born in Miraflores; Fireman in Tunja and Dalia in Bogotá. They had the same low English level: I define it as a basic English level as they knew some vocabulary and the basic verbs tenses. They belong to the same economic status: middle class. They had good friendship established along their studies in their academic program. They had different characters, too. Garfield was the analytical one, Dalia was quiet, and Fireman was the leader. Another group was composed of two women who studied pre-school education and a man from the systems engineering program. Sunflower was born in San José del Guaviare; Mafalda was born in Tunja, and Olafo was born in Paipa. All were in fourth semester. They belong to the same economic status: middle class. Olafo had an advanced English level and the girls had a basic English level. Olafo was angry; Sunflower funny and creative, and Mafalda sweet. The next group was composed of medical students: two women, Little Red Hood and Blanca Nieves. Little Red Hood was born in Tunja and Blanca Nieves in San Gil; they were in fourth semester, middle class. Little Red Hood was very strict and Blanca Nieves was more spontaneous. The last participant was a student from roads and transports engineering. Cinderella was born in Corrales, she was in fifth semester and had a low English level; she belongs to a high middle class and was a shy girl.

The institution where I conducted the research was Universidad Pedagógica y Tecnológica de Colombia (UPTC). It is located in the north of Tunja, the capital of the department of Boyacá. It is a public university that has an average of 23,000 students coming from different regions of Colombia. UPTC offers professional and disciplinary academic programs such as engineering, educational and pedagogical programs, medicine, law, veterinary medicine, nursing, psychology, business

administration, economics, and accounting, among others. It also has distance programs. The mission of this university is the transformation and development of Colombian society raised upon democratic principles where individual, collective and cultural human rights must be considered. As both the mission and vision of the institution are based on the development of a socio-constructivist philosophy within a research perspective, then my study is coherent to the educational context.

Findings
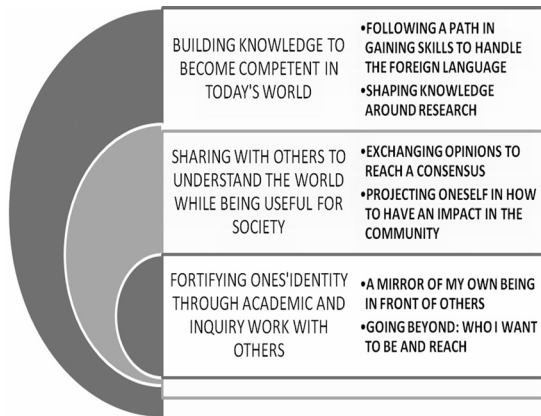
Figure 1. ESP Students' Connections between Their Inquiries
and Their Personal and Social Life

1. Building Knowledge to Become Competent in Today's World

What I want to say with this category is that human beings need to perceive the world around them. The human requires some instruments for making sense of knowledge. Through the development of this project, students found two relevant tools for the acquisition of knowledge: language and research.

1.1 Following a path in gaining skills to handle the foreign language

This research project gives light on how students increased their proficiency in the foreign language. The road that students followed was the implementation of

the inquiry-based approach. Along the path they faced new experiences. Participants expressed a great concern and interest for English learning from several perspectives. There was special attention to the structure of the language. Participants felt that their English level increased significatively. Students emphasized pronunciation; they recognized their pronunciation mistakes and they learnt about the structure of sentences; they knew technical vocabulary and expanded their academic programs. As an example, let us read the following quotations taken from students' instruments:

> The pandemic is the effect of whatever illness on a geographic long area. Influenza is an illness generated by ortomiroviridae virus, in human beings the sintomathology is fever, hurt throat, hurt muscles, hurt head, cough, weakness and tired. (Sunflower, artifact, July 2007) They are performed an English vocabulary related with Medicine, her academic program.

> Bearing in mind the importance of English language in the engineering field, I decided to design a dictionary with the technician and more frequent words related to my academic program. The most of inquiries and tasks have as reference or bibliography English books or English web pages. I consider pertinent to have available a dictionary with the specific words related to engineering, in this way, it will be a didactic tool and it will do more easily our translations. (Cinderella, artifact, July 2007)

> Para mí esta experiencia de expresarme ante un grupo de personas fue algo complicado, debido al temor de inglés (pronunciación, manejo de los términos) pero creo que no solamente se debe ver desde este punto de vista sino algo que nos permite cerrar las barreras o miedos que le tenemos a este idioma. (Olafo, reflective journal, May 2007)

> Pero qué sería de nosotros si no manejamos el inglés y por medio de el conocer toda la información que hay en el mundo y nos permite crecer intelectualmente y ser competitivos. (Blanca Nieves, reflective journal, August 2007)

As you can see, learning English through inquiry reveals a great part of the tenets proposed in the theoretical framework of this study regarding the implementation of inquiry-based learning because this approach brings the students chances to develop many activities at the same time with several purposes. The learning of language seemed to be partly unconscious. We did not work grammar explicitly. However, students apparently learnt grammar by means of oral reports and the listening skill at the same time and when they had to seek information in English or Spanish they explored technical vocabulary.

Another important finding in this part was the psychological impact to face the fear to speak English. It was students' first explanation in English. It was a tremendous challenge for them. All groups made their best effort because it was so much an individual as a collective challenge. Participants tried to overcome this frustration and discriminatory feelings began to disappear. Students understood that they were able to accomplish all kind of projects. Then, critical pedagogy is present here. Students learnt for life to assume great challenges as persons and future professionals.

1.2 Shaping knowledge around research

Students expressed that their involvement in English inquiry projects fulfilled a lot of their expectations such as projecting themselves as future professionals and getting to know the real world that they have to face; they discovered new fields of action and they assumed new goals, and projects. Research helps them to grow up as professionals, learn for life and nurture their research spirit. All these issues will be reflected in a better quality of life as persons and professionals. Let us see some examples in regard to this characteristic:

> Como profesionales, la investigación es de vital importancia porque nos permite crear nuevas reflexiones y campos de acción que de pronto no se han tenido en cuenta. (Garfield, reflective journal, August 2007)

> La investigación tiene como objetivo obtener conocimiento nuevo que en otras palabras sería la solución a problemas previamente planteados, ya sean de carácter científico, tecnológico, cultural, social, etc. El resultado de nuestra investigación fue el producto de la recolección, análisis y la interpretación de los datos que recogimos en el municipio de Sotaquira. (Blanca Nieves, personal communication, September 2007)

> Inquiring allows us close to the real world, it does more sensible, more humanize and more able to face the world. (Little Red Hood, reflective journal, August 2007)

The results in this project agree with Vygotsky (1978) and Wells' principles about dialogic inquiry (1995). My students designed inquiry projects focused on social problems from an academic orientation by means of collaborative work, dialogic knowledge building and an inquiry-oriented curriculum. These are the requirements for the development of society and individuals. Students acknowledged their capacity for solving problems, for being active members of society by applying their

knowledge. This capacity involves other relevant attitudes such as to make decisions, to innovate, to face the real world. Additionally, some issues in relation to the transformation of the individual into a leader were mentioned. These findings are pertinent to critical pedagogy, which claims the production of useful and applicable knowledge to the individuals and their communities.

I am going to consider the critical pedagogy from another dimension. McLaren (2003) talks about the contradictions; in this case, the contradictions are the theory and practice. Students gave importance to the theory acquired through the academic programs, but the application of theory in students' projects was relevant for them. Participants demanded more practical activities like inquiry-based learning. Reviewing Giroux' tenets (1983, 1988), we applied macro-objectives. Students developed their inquiry projects supported with specific knowledge with the purpose to propose or solve a determined social problem.

2. Sharing With Others to Understand the World While Being Useful to Society

This category means that human beings are not alone in the world. Human beings share their existence with others of the same kind. Social perception can have more than one interpretation: participants' data showed two connections which helped me to define two sub-categories: Exchanging opinions to reach a consensus and projecting oneself to have an impact in the community.

2.1 Exchanging opinions to reach a consensus.

Each human being has a personal perception of the world around her or him. This fact depends on many factors such as economics, culture, family, academy and others. These individual differences are part of the next category related to identity, but these differences are also important for this category in the sense that students had the opportunity to interchange their perceptions, conceptions, points of view, and opinions to design and develop the English inquiry projects.

Diversity in groups allowed students to gain experience about the design of the project as some students had very little knowledge related to research. In regard to the previous conception, Fireman, Sunflower and Mafalda wrote:

> Fue una experiencia excelente, pues se aprende a conocer a la gente, lo que piensa de un tema, lo que cree, y se ponen a prueba unos conocimientos con respecto a los de otro,

una fortaleza es que hay más puntos de vista, esto hace que el proyecto sea más eficiente.
(Fireman, reflective journal, August 2007)

Es una buena manera de socializar los temas evitando el miedo o la angustia, además es
bueno establecer relaciones con mis compañeros dentro del salón, también me aportó en
el conocimiento que puedo adquirir con los otros proyectos que son de gran interés.
(Mafalda, personal communication, September 2007)

Logramos concertar todo, cada uno teníamos distintas ideas, cada uno teníamos nuestras
capacidades, nuestras destrezas, conocimiento para aportar al proyecto, y no desechamos
opiniones sino al contrario las acogimos, nuestro compañero nos ayudo más con la parte
de inglés. (Sunflower, personal communication, September 2007)

This sub-category can be related to the socio-constructivist theory since it claims
that knowledge is socially constructed; it is the product of agreement or consent
between individuals who live out particular social relations (e.g. of class, race, and
gender) and who live in particular junctures in time. Even though students belonged
to different academic programs, they were from diverse regions of Colombia; they
had their own ideas about religion, politics, and so on. They could work as a group;
they took advantages of these differences to propose interesting English inquiry
projects. Individual differences became collective.

2.2 Projecting oneself to have an impact in the community

This means that each human being has a function in the world and tries to
achieve it in the best way they can. They were in contact with populations that are not
taken into account by society and the social situations of some individuals who suffer
for being poor. These realities nourished students' sensibility for helping people.
English inquiry projects helped students to be interested in the problems linked to
their professions. This is an example of these considerations:

Mi proyecto si cambió mi perspectiva como persona, porque allí pudimos ver que la
realidad de muchos no es la misma que la mía, y vi de cerca el sufrimiento de muchos por
ser pobres y no tener nada, así como gente importante que al ver esto no hace nada para
cambiarlo. (Dalia, reflective journal, August 2007)

El proyecto si cambió mis perspectivas, pienso en la importancia de ser un buen
profesional, en dar lo mejor de mí, porque de todo lo que haga ahora por aprender va a
depender mí futuro y lo útil que pueda ser a la sociedad. (Blanca Nieves, reflective
journal, August 2007)

According to Giroux (1988) students developed macro objectives, they connected English inquiry project with themes such as health, education, politics which have social and political implications; likewise students began with a language of critique, the building of their inquiry questions and continued with a language of possibility through the design of their projects. Some of them worked the language of action; for instance, the implementation of some strategies for teaching colors in English, and the design of an engineering dictionary. The engagements of the socio-constructivist theory with critical pedagogy implied a self-transformation and a social change through an inquiry cycle. Students acquired a sense of belonging as regards their specific knowledge and the inquired population.

3. Fortifying one's Identity Through Academic and Inquiry Work With Others

Identity has differences and contradictions which are constantly overcome in the growing up process and individual development by means of education, and these depend on the given conditions. I agree with this philosophical principle. One of these conditions is the school; teachers and knowledge have a great responsibility in the formation of students' identity. For this study, identity involves the recognition of oneself and others through teamwork. Data analysis provided me two-subcategories of this category: "A mirror of my own being as regards others" and "Going beyond: Who I want to be and what I want to achieve."

3.1 A mirror of my own being as regards others

Students' reflections, experiences, and feelings displayed the way each one contributed to the design of the English inquiry project. Students stressed their qualities which reflected their identity. Most of them underlined the effort, dedication, and interest for developing the project; they considered important other qualities like punctuality for meetings and appointments, and responsibility with the assigned tasks. They pointed out the capacity of analysis and to be neat as qualifications for doing inquiry. These qualities avoided mistakes in data analysis. This is an example of these reflections:

Siempre me he caracterizado por el empeño e interés por hacer las cosas bien, otra característica son las ganas de analizar los datos y el orden sobre todo en un proyecto que

es de recolección de datos que se necesitan manejar muy bien para que pueda tener éxito y no tengan errores. (Little Red Hood, personal communication, September 2007)

De mi compañera me gusta su interés por el estudio y su empeño por hacer las cosas bien… Ella es muy juiciosa, me hace dar cuenta de lo importante que es ser delicada, además maneja el inglés mejor que yo…lo mejor de ella es que es muy compañerista y eso permite que nos complementemos y ayudemos. (Blanca Nieves, reflective journal, May 2007)

In spite of individual perspectives, they arrived at a consensus which can be seen as a sort of collective identity in function of the well-being of the teamwork. This is a sample of the previous lines:

Todos dimos ideas, y respetamos lo que cada quien pensaba, escogimos la mejor y nos repartimos los trabajos, cada quien busco que las cosas se hicieran bien que no fuera algo mediocre, sino que la funcionalidad de los tres se viera como era y que fuera realmente algo agradable tanto para nosotros como para los demás y pues obviamente para la profesora. (Mafalda, personal communication, September 2007)

3.2 Going beyond: Who I want to be and what I want to achieve

Students realized that knowledge acquired through inquiry opened their minds for exploring the real world. The theory obtained in the classroom was not enough; for them it was important to go beyond "the board" and to learn through contact with the reality. In regards to the previous lines, let us read this comment:

La investigación nos forma como personas porque aprendí como estudiante y profesional que no nos podemos quedar solo con lo que nos enseñan en el aula, porque esto es mínimo comparado con lo que se aprende investigando y colocando en práctica lo que nos enseñan, esto es lo que necesita un país para salir adelante. (Dalia, reflective journal, August 2007)

Through this inquiry process participants gained another perception of themselves by means of identification of strengths, values, and weaknesses which allowed them to visualize their goals and expectations as professionals. In relation to the previous lines, let us see:

Claro que me gustaría seguir investigando, porque este proyecto se dirige hacia lo que estoy estudiando, además uno aprende a como motivar e incentivar a los niños para enseñarles inglés siendo muy recursiva y didáctica, además me gusta el inglés y quisiera aprender más acerca del tema. (Sunflower, reflective journal, June 2007)

Students acquired a new constructive mode of thinking and a new constructive action to transcend the contradictory state of affairs, as critical theorists claim in critical pedagogy. Burbules and Berk (1999) define a critical person as someone who seeks justice is moved to change things. Students achieved this principle of critical pedagogy. They not only criticized, but also had a change of attitude toward English language learning, and they wish to continue inquiring too. These changes of thoughts and attitudes can fortify students' identity.

Conclusions

The main research question that I addressed in this study was, "What connections do ESP students from UPTC make between their English Inquiry Projects and their personal and social perception? In the next lines I will provide specific answers to that question.

As a personal aspect, students established as primordial for them the acquisition of knowledge. This knowledge was perceived from two perspectives: English language and academic and behavioral knowledge gained through the inquiry cycle. In regard to the first, English language, students handled it in a practical way. They applied the information of their academic programs to learn the English language. This fact was relevant and interesting for them because they knew and explored technical vocabulary. The English skills they saw as more meaningful for them were listening and speaking skills. This last one improved the conditions to practice it, thus they are going to break some barriers and frustrations that they had stored up for years.

Another personal connection was the investigative knowledge acquired by means of the inquiry cycle. Students came closer to the real world, they detected social problems, and they recognized the importance of the application of their knowledge to solve some of these problems. Students understood the possibility to explore new action fields and propose innovations by means of inquiry-based learning in order to solve and improve the quality of life in their contexts. This inquiry process helped them to project themselves as professionals. On the other hand, students valued the impact and knowledge of other academic programs. They recognized the excellent work of their partners, they had access to the acquisition of knowledge from different disciplines and they knew the social contribution of each one of these programs. Finally, students learnt about the design of an inquiry project; for example, building a research question, designing the instruments for collecting data, and tabulating the

data. They also developed some mental activities like analysis, inference, selection, relation, interpretation in the reading of their technical articles to define the theoretical framework of their projects.

An inquiry-based approach implies collaborative work. Through this collaborative work, students had permanent interactions with the members of their team, with their classmates, and with their teacher. These interchanges were defined by students from two social points of view: the first one, the gains obtained in the teamwork; students acquired knowledge about the English language, the inquiry process and other academic disciplines; they learnt to see the facts and things from different perspectives; students learnt to communicate their points of view, perspectives, ideas, suggestions for reaching a consensus and they recognized their strengths and weaknesses as regards others. This last statement allowed them to improve their behavior, to strive each day to be better people and professionals. The second point of view gathered the interactions and the impact that students wanted to have on their communities. The inquiry-based approach offered students contact with vulnerable people with social difficulties. This fact nourished students' sensibility for helping those people with the applicability of their knowledge to solve or improve these limitations. Students wanted to be intellectually prepared for achieving this goal. For this reason, they are taking advantage of all benefits that UPTC and teachers can provided them in order to be excellent professionals.

The last connection that students established was personal and social. It is related to students' identity. I see the school or an academic setting as a place where human beings are transformed by means of knowledge. Students agreed with me. They recognized their strengths and weaknesses through interactions with their classmates. They also appreciated classmates' values. In this sense, students seem to be modifying their behavior for trying to get the ideal identity. Once students identified their strengths, capacities, and abilities they addressed these values towards their next future; as students overcame difficulties in relation with English language, they wanted to continue improving their English level.

Pedagogical Implications

Doing inquiry implies a serious commitment for teachers. The teacher-researcher must be willing to assume more responsibilities, to spend a lot of extra time on work, to expand her/his knowledge to other fields, to be concerned with problems of identity, race, culture, and gender for helping students to accept others

and to be accepted. Inquiry-based learning is an optimal alternative for promoting and improving the relationships among students and teachers.

My advice for future projects based on inquiry is to have the whole class work on a single concept, theme or issue. The teacher-researcher can suggest particular aspects of that theme or idea to work on in groups. On the contrary, having groups with different concepts implies a hard task for the teacher, it demands a lot of time, effort, stamina, and sometimes money. The rhythm of the work and tasks becomes slow due to the number of students and the diversity of the themes.

I am a little worried because one of my expectations was to find leadership inside the groups; however, through data analysis, I did not find enough information to support this aspect. Several questions come to mind: Are university teachers promoting leadership in students? Why do students not assume a leadership attitude? What kind of leadership do students want? And so on. In regards to English language learning, ESP courses should have a different focus from the teaching of grammar. As I understand it, ESP courses seek to prepare ESP students to learn the language in order to acquire a set of professional skills as well as to perform particular academic tasks. English language at the UPTC should have a specific focus for each academic program. Students who study pedagogical academic programs require learning English with a pedagogical perspective because the labor market seeks bilingual teachers. Medical students require English language for other purposes such as study or work.

Anyway, inquiry-based learning promotes English learning in all fields. Students and teacher can explore all possible themes from their perspective, interests, and concerns. Students have contact with English language in a practical way related to themes and issues of their interest. Students demand that all exercises must be in English for improving the speaking and listening skills at the same time. Developing inquiry also allows us to make sense of acquired knowledge such as English, which is seen by students as indifferent and strange; validating information and theories that have been commonly accepted truisms; and making proposals to change deficient systems. Through critical pedagogy teachers can enable their student to choose their own lifestyle. If they want to belong to those who accept relations of unequal power or if they want to belong to those who resist such asymmetries of power and take an active part to overcome its effects, the choice is theirs. We must explore the real world and feel ourselves part of it. We must become active members of the progress and development of our society, knowing the diversity of cultures through language because it is the primary tool to achieve all these purposes.

References

Bruner, J. (1990). *Acts of meaning.* Cambridge, MA: Harvard University Press.

Burbules, N., & Berk, R. (1999). Critical thinking and critical pedagogy: Relations, differences and limits. In T. Popkewitz & L. Fendler (Eds.), *Critical theories in education: Changing terrains of knowledge and politics* (pp. 45-65). New York, USA: Routledge.

Chambers, S. (1996). *Reasonable democracy: Jurgen Habermas and the politics of discourse.* New York, USA: Cornell University Press.

Concept to Classroom. (2004). *Inquiry-based learning* [Workshop]. Retrieved December 11, 2006, from http://www.thirteen.org/edonline/concept2class/inquiry/

Freire, P. (1970). *Pedagogy of the oppressed.* New York, USA: Seabury Press.

Freire, P. (1985). *The politics of education: Culture, power, and liberation.* South Hadley, MA, USA: Bergin & Garvey.

Giroux, H. A. (1983). *Theory and resistance in education: A pedagogy for the opposition.* South Hadley, MA, USA: Bergin & Garvey.

Giroux, H. A. (1988). *Teachers as intellectuals: Toward a critical pedagogy of learning.* South Hadley, MA, USA: Bergin & Garvey.

Goldstein, T. (1997). *Two languages at work: Bilingual life on the production floor.* Berlin, Germany: Mouton de Gruyter.

Kubow, P. K. (1999). Preparing future secondary teachers for citizenship educator roles: A possible direction for pre service teacher education in the new century. *Asia Pacific Journal of Teacher Education & Development, 2*(2), 53-64.

McCombs, B. L., & Whisler, J. S. (1997). *The learner-centered classroom and school: Strategies for increasing student motivation and achievement.* San Francisco, USA: Jossey-Bass.

McDowell, C. (1996). Democratic education: Imagery, language, and culture. *The International Journal of Social Education, 11*(1), 91-97.

McLaren, P. (2003). *Life in schools: An introduction to critical pedagogy in the foundations of education* (4th ed.). Boston, USA: Allyn & Bacon.

Merriam, S. (1988). *Case study research in education: A qualitative approach.* San Francisco, USA: Jossey-Bass.

Patton, M. Q. (1985, April). Quality in qualitative research: Methodological principles and recent developments. Invited address to division Journal of the American Educational Research Association, Chicago, IL.

Patton, M. Q. (1990). *Qualitative evaluation and research methods* (2nd ed.). Newbury Park, CA, USA: Sage Publications.

Sheingold, K. (1987). Keeping children knowledge alive through inquiry. *School Library Media Quarterly, 15*(2), 80-85.

Short, K. (1993, November). *Curriculum as inquiry.* Paper presented at the Annual Convention of the National Council of Teachers of English, Pittsburgh, PA.

Short, K., & Burke, C. (1991). *Creating curriculum: Teachers and students as a community of learners.* Portsmouth, NH, USA: Heinemann.

Vygotsky, L. (1978). *Mind in society: The development of higher psychological processes.* Cambridge, MA, USA: Harvard University Press.

Wells, G. (1995). Language and the inquiry-oriented curriculum. *Curriculum Inquiry, 25*(3), 233-269.

Yin, R. K. (1984). *Case study research: Design and methods.* Thousand Oaks, CA, USA: Sage Publications.

Yinger, R. J., & Clark, C. M. (1981). *Reflective journal writing: Theory and practice* [Occasional Paper No. 50]. The Institute for Research on Teaching, Michigan State University, Michigan.

The Author

Claudia Janneth Parada Moreno is a teacher at *Universidad Pedagógica y Tecnológica de Colombia* and an M.A. candidate in Teaching of Languages at the same university. She holds a bachelor's degree, "Licenciatura de Idiomas" from UPTC. She has been teaching English for 8 years in secondary schools and one year at UPTC.