Project-based Chinese as a Foreign language instruction: A teacher research approach

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Abstract: This study implements and evaluates an action research project carried out by a teacher in a U.S. high school, where two classes of students studied Chinese as a foreign language (CFL) through project-based instruction (PBI) over an academic year. The purpose of the study was to investigate the effectiveness of PBI in teaching CFL by eliciting students’ and the teacher’s experiences and perceptions of PBI. Data collected include student interviews, surveys, project products, classroom observations, and teacher journals. The findings suggest that PBI is an effective approach to teaching and learning of language, culture, and other skills simultaneously. PBI was reported to be beneficial in engaging and motivating students in learning, enhancing cultural knowledge, and improving their language skills. Although students expressed difficulties with using target language during PBI, specifically with sentence structure and character memorization and recognition, they were able to see their language weakness and needs and expressed a strong desire to improve them. In the process of PBI, the teacher established a collaborative relationship with students and became a learner and a facilitator in students’ learning. This research also demonstrates that teacher research can be a beneficial tool for practitioners to examine students’ learning as well as teachers’ own teaching practice.

Keywords: project-based Instruction; Chinese as a foreign language; teacher research
1. Introduction

Chinese, as one of the critical languages, has become the center of attention with China's economic rise. The interest has led to a significant growth in Chinese language enrollment in American schools over the past five years (Zhao & Huang, 2010). For example, a survey by American Council on the Teaching of Foreign Languages (ACTFL), funded by the U.S. Department of Education reveals that the Chinese language had the largest percentage growth, increasing by 195% from 2004-05 to 2007-08 in K-12 public schools. The recent North American census data shows that ‘Chinese’ (all dialects) is now the most widely spoken home language after English and Spanish in the U.S. (Duff, 2006). Various programs such as Chinese K-16 Flagship, STARTALK, and College Board's Advanced Placement program, have been established in response to this growing interest (Lee-Thompson, 2008). Following the national interest and growth in teaching and learning the language, Chinese language programs funded by U.S. Department of Education Foreign Language Assistance Program have been newly added to the Cincinnati Public School District in Ohio, U.S. Currently, the school district is exploring and developing appropriate curriculum that would enhance the learning of language and reflect the academic environment of the United States due to a severe shortage of research and appropriate Chinese as Foreign Language (CFL) curriculum for English native speakers locally and nationally (Zhang & Li, 2010). The scarce existing curriculum is heavily teacher and lecture centered, transmitting materials with strong focus on China and Taiwan with little regard to learner agency and local knowledge, which demotivates students.

In addition, the major source of the teachers for Chinese programs are native speakers of the language who are either guest teachers from mainland China and Taiwan or educated native speakers of Chinese who currently reside in the United States (Asia Society, 2010). These native language teachers have linguistic competence and are living examples of the pragmatics of the target language (Schrier, 1994). Furthermore, they help to enhance students’ skills in cross-cultural communication by introducing the target culture and bringing in global perspectives.
(Cook, 2000; Dunn, 2011). In the meantime, however, some scholars have criticized these teachers’ lack of understanding and training of American pedagogy as the vast majority of them were formally educated outside North America (Wang, 2009; Haley & Ferro, 2011; Xu, 2012). In the absence of pedagogical knowledge, they tend to teach the way they themselves were taught languages in the past (Duff, 2008), which is more towards teacher-centered, grammar translation approach (Chang, 2004; Chu, 1999) that does not adequately address the needs and expectations of learners in American K-12 contexts. In response, Wang (2007) calls for more research on CFL and development of alternative and responsible pedagogy that adequately addresses existing gaps in the field. One such pedagogy could be project-based language instruction.

2. Literature Review

2.1 Project-Based Instruction in Second and Foreign Language Instruction

Project-based instruction (PBI), also known as project method (Kilpatrick, 1918), project-based learning (Peterson & Myer, 1995), project work (Shoring, 1995), project approach (Diffily, 1996) and project-oriented approach (Carter & Thomas, 1986), is a pedagogical activity widely used in teaching various subjects such as art, biology, chemistry, science, math and language (Beckett, 1999; Leki, 2001). Projects are extended tasks that involve a variety of individual or cooperative activities in working towards an agreed goal and include selecting a topic, making plans, researching (to collect and analyze information), developing products as well as oral and written reports (Beckett, 1999; 2002; Hedge, 2002; Wrigley, 1998). In language learning, PBI provides students a space for real second/foreign language use through extensive contact with native speakers or native texts and integrate language with other skills (Eyring, 1997).

Many benefits of integrating project works into second and foreign language education have been reported, among which, according to Stoller (2006), the most commonly reported is the authenticity of students’ experiences and the language they are exposed to and use through project works. For example, Gu (2002) studied an online writing project in which students were provided with various opportunities to use English via email correspondence with native speakers, group and classroom discussions with peers and the teacher. The findings showed that students had positive perception of the online writing project and demonstrated strong enthusiasm towards the authentic and purposeful cross-cultural communications. In an EFL setting in China, Ke (2010) designed an experimental study to evaluate the effectiveness of PBI on college students’ learning of English. Students believed that the English course using PBI provided them with opportunities to use English in real life situations, which is different from tradi-
tional EFL instruction with a focus on memorization of textbook information. Through PBI, students were able to learn and use language functionally.

Another reported benefit of PBI is motivation, engagement, enjoyment and creativity of students in participating in project works, which was mostly reported by practitioners. For example, Levine (2004) described the implementation of PBI in German courses at a university and discussed how PBI accommodated the variety of interests, personality types, and learning styles. Tessema (2005) reported an English writing project in Ethiopia in which he explored ways how the project work can help students become actively involved in writing tasks. PBI is also stated to inspire creativity. Tomei, Glick, and Holst (1999) organized a project in an EFL classroom at a university in Japan. The project asked students to survey their peers on a topic about student life. Their study shows that the project work promoted language learning by increasing the amount of input, making the content applicable to students, and encouraging learners to be creative and imaginative.

The third most commonly reported benefit is improved language skills. For example, in order to create opportunities for students to practice their academic listening comprehension and note-taking skills, Gardner (1995) organized a project in an English course at the University of Hong Kong and found that the project helped students improve not only their listening and note-taking skills, but also writing skills. Through implementing project work in the teaching of English as a foreign language in Greek state primary schools, Fragoulis (2009) discovered that students showed improvement in all four language skills, especially speaking and listening as students were provided with opportunities to participate in real and authentic communication activities.

In addition to the benefits listed above, PBI has also been said to help students gain cross-cultural knowledge (Abrams, 2002; Bateman, 2002; Carter & Thomas, 1986; Gu 2002; Wu & Meng, 2010); practice their social, collaborative and communicative abilities (Beckett, 1999; Coleman, 1992; Lee, 2002; Zhao, 2004); increase content knowledge acquisition (Allen, 2004; Beckett, 1999); build students' confidence and self-esteem (Carter & Thomas, 1986; Coleman, 1992; Gardner, 1995); provide students with autonomy and independence (Coleman, 1992; Gu, 2002; Lee, 2002); foster critical thinking and problem-solving skills (Allen, 2004; Beckett, 1999; Gu, 2002; Sheppard & Stoller, 1995). Most of the studies above on PBI report more than one benefit of using PBI for teaching and learning second and foreign languages.

However, PBI has also been found to be a source of anxiety and stress (Beckett, 1999; Eyring, 1989; Moulton & Holmes, 2000). Beckett (1999) investigated the implementation of PBI in English as a foreign language class at a Ca-
nadian secondary school. Many student participants felt unsure of PBI approach to learning, reporting that it was difficult, too much work, and time-consuming. They wished, instead, that teachers could teach from textbooks so they could learn from both their teachers and textbooks. Wihelm (1999) and Moulton and Holmes (2000), who also examined ESL students’ perceptions of PBI, reported similar findings. According to Wihelm (1999), most student participants demonstrated enthusiasm working on projects and enjoy taking control of their learning, whereas some felt anxious and stressed. Moulton and Holmes (2000) experienced low course completion rate as some students in the English course resented PBI concepts and considered the approach irrelevant to their language learning goals. In contrast to the prevalently known benefits of group work to English language learners in terms of language development and socialization (Cohen, 1994; Holt, 1994; McGroarty, 1989), Leki (2001) discovered that international students whose first language was not English reported more instances of dissatisfaction than satisfaction with group works. Students felt that their linguistic limitation prevented them from fully participating in group works with American peers, which further limits their language development and socialization.

2.2 The Project Diary

According to Beckett and Slater (2005), many of the negative evaluations of PBI above arise due to the conflicts in understanding the purposes of PBI by students and teachers. Thus, despite the valuable educational goals achieved through the adoption of PBI by teachers, students might not be able to see the learning that takes place in project activities. To address the issue, Beckett and Slater (2005) developed a tool called ‘The Project Framework’ to help teachers raise students’ awareness of how language, content knowledge and skills are simultaneously learned through PBI. The project diary is a part of ‘The Project Framework’, a weekly summarization task that asks students to detail their linguistic achievements as well as content and skills learning that took place during the week (see the full example in Beckett & Slater, 2005). It also requires students to record and reflect on what they have accomplished and what they were not able to achieve for a project. The purpose of project diaries is to reinforce the value of project activity in helping students learn the language, content and skills. In Beckett and Slater's (2005) study, the Project Framework was designed and implemented in a Canadian undergraduate university ESL classroom with 57 students. All of the students were able to make their own project diaries and use them to document their weekly learning. Students successfully achieved the learning goals set by the teacher and themselves. This study concludes that ‘The Project Framework’ achieved its purpose by enabling students to see the value of PBI in integrating learning of language, content knowledge and skills. However,
there are no more empirical studies that implemented the 'The Project Framework', especially the project diary component, after the original study.

Furthermore, compared with the popularity of PBI in English as a second and foreign language education, however, little is known about the effectiveness of PBI in CFL setting (Zhao, 2014). A systematic search for publications on Chinese language education was conducted through library search, in databases such as Education Full Text, Education Research complete, and Arts and Humanities Citations, and in journals that include *Journal of the Chinese Language Teachers Association*, *Foreign Language Annals*, and *Modern Language Journal*, among others (see details in Zhao, 2014). Based on the review of a total of 339 relevant publications between 1999-2013, the majority (42%, n=143) was found to be linguistics-oriented, examining specific linguistic structures of Chinese language such as phonetics, grammar, syntax, and semantics (e.g., Chen, 2009, Chen & He, 2001; Hu & Pan, 2009; Xiao, 2011). Fewer publications (5%, n=17) focused on pedagogy except Jin, 2005, Lai, Zhao & Wang, 2011 among a few. Such studies that explore the application of teaching methods in classroom settings are essential as it can benefit practitioners with their teaching practice and help to 'sustain the growth and ensure the quality of Chinese language instruction and learning' in general (Wang, 2012, p.37). In addition, noticing that most of the CFL research studies published in the *Journal of the Chinese Language Teachers Association* focus on higher education, Wang calls for more research-based studies to be conducted at the K-12 level to inform program establishment and pedagogy addressing the national need of language learning at a younger age. Thus, the current study addresses gaps in the literature by implementing and investigating PBI in CFL instruction at a high school, using project diaries as a self-assessment tool, and eliciting students’ and the teacher’s voices about their experiences with PBI and project diaries.

3. Methods

3.1 Teacher Research

In this research, PBI was applied as an intervention in a teacher-initiated-action-research project that resulted from a perceived need to improve students' engagement, cultural knowledge and communicative skills in Chinese. Action research has been well documented as a direction to knowledge creation that arises in response to the increasing need for more relevant and practical knowledge in social science (de Zeeuw, 2003). In classroom-based action research, questions emerge from practical situations, such as a puzzle or a gap between the ideal and the reality that practitioners want to know more about or to
address by making changes (Cochran-Smith & Lytle, 2009). Instead of waiting for outsider researchers to study educational issues and inform teachers what to do, 'teachers as researchers' (e.g., Allwright & Bailey, 1991; Nunan, 1989; van Lier, 1988) can focus on and deal with issues from an insider perspective that most outsiders do not have. Furthermore, action research helps teachers build their theories of practice, and by conducting classroom research, teachers develop praxis of teaching and learning and create new knowledge in transforming their practice (McNiff & Whitehead, 2006). Pedagogies and instruction approaches though widely discussed and studied in literature, can become more meaningful to both the researchers and practitioners if they are studied and examined by classroom teachers themselves.

In this study, the teacher researcher under the guidance of a professor specialized in foreign language education and classroom research, diagnosed students' learning problems, planned and implemented PBI as an intervention to the current curriculum, evaluated effectiveness of PBI and specified learning gained in the process (see Figure 1). This five-phase approach appeared in Baskerville & Wood-Harper’s paper (1996) as a model for information systems research and was applied in the current study for its detailed structure and cyclical process. Diagnosing is defined as a step at which the teacher examines student learning and looks for problems or gaps between the ideal and the reality of teaching and learning. The gaps can be related to particular teaching areas (e.g., reading, writing), teaching materials, students behaviors, achievements or motivation, classroom management, and personal management issues (e.g., time management, relationships with colleagues) (Wallace, 1998). In the current study, the teacher found that students lack language practice, especially with oral Chinese skill due to the inappropriate activities and the teaching materials. Students also displayed behavioral issues (e.g., listening to music and playing online games during the individual activity time) which according to students were due to their boredom with the repetitive class format. Action planning establishes the approach to change and improve problems identified at the previous stage. In this study it was to use PBI for helping students with oral Chinese skill and improving their classroom behaviors. Action-taking phase then implemented the planned action-PBI, including the use of project diaries for students to document their learning. After the actions were completed, surveys and interviews were conducted with students to evaluate their perceptions of the outcomes of PBI. Additionally, the assessment of PBI included examination of students’ project diaries, teacher reflective journals, classroom observation, and students project products to seek both the students’ and the teacher’s perceptions and experiences with PBI. The activity of specifying learning refers to the evaluation results and knowledge gained in the
action research cycle that could provide foundation for next action research cycle or benefit a broader audience in the community. This paper focuses mainly on the last two phases of the cycle by reporting the evaluation results of PBI in CFL classroom from the perspectives of the students and the teacher researcher. Specifically, the teacher researcher aimed to explore: (1) How do students' view project activities? (2) What are the teacher's experiences and perceptions of PBI?

![Action Research Cycle](image)

*Figure 1 Action Research Cycle, adapted from Baskerville & Wood-Harper (1996)*

3.2 Student Participants and Setting

Student participants in this study were eleventh grade high school students, aged 16-18 years. The school is an urban school with around 700 enrollments, among which 89% are African-American students. Chinese was a new program established in 2012 with funding from the Language Flagship grant awarded to the school district. Chinese was offered daily for 50 minutes, to class A for a year and class B for six months. 18 students participated in the projects as part of their coursework. At the end of the term, consent forms were given to all of the students to obtain their consent to participate in this study and their permission for us to use their projects and other school works. Those who were 18-year-old and above made the decision by themselves, whereas those who were under 18 brought the consent forms home to their parents for permission. Participation in
the study did not affect students' grades, which was explained to students and also stated in the consent forms. In the end, 10 of them agreed to be interviewed and surveyed. Student participants were named A, B, C, D... alphabetically for data presentation.

3.3 Data Collection and Analysis

Data collected for this study include student projects, teacher observations, teacher reflective journal, students' project diaries, survey of and interviews with students. According to Henry (1994), there are three types of projects, namely structured, semi-structured, and unstructured. In this study, each class had five project activities. The first project assigned to both of the classes, was a structured project in which the teacher determined the topic, materials, and the presentation, with the purpose of training students how to do project work (see Table 1). For example, in the study of Chinese names project (structured), the teacher chose the topic, designed what activities students need to do, asked students to gather information for the topic based on the research instructions given by the teacher, and set up the requirements students need to meet for their final oral report (see Appendix A). In the unstructured project, students themselves decided on their project topics, organized activities, conducted their own research and presented their final products. Most of the projects (three out of five for each class) were semi-structured projects defined and organized by both the teachers and students. Each project lasted for two weeks during which students spent two to three hours per week on the projects, mostly in class. At the end of each project, students were asked to write a project diary to record and reflect on their learning for each project (see Appendix D). During the projects, the teacher kept a reflective journal and took field notes. At the end of the term, an electronic survey was distributed to each student for feedback regarding PBI (see survey questions in Appendix B). Semi-structured interviews (see Appendix C) were conducted in the last two weeks before the semester ended and each of the interviews lasted for 20 to 30 minutes. In the end, nine interviews and nine surveys were collected.

<table>
<thead>
<tr>
<th>Project Titles</th>
<th>Classes</th>
<th>Types of Projects</th>
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<tbody>
<tr>
<td>A study of Chinese names project</td>
<td>Class A and B</td>
<td>Structured</td>
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<tr>
<td>Introducing family members project</td>
<td>Class A and B</td>
<td>Semi-structured</td>
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<tr>
<td>Spring festival decorations project</td>
<td>Class B</td>
<td>Semi-structured</td>
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<tr>
<td>Telling a story about oneself project</td>
<td>Class A</td>
<td>Semi-structured</td>
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<tr>
<td>Thanksgiving Day project</td>
<td>Class A</td>
<td>Semi-structured</td>
</tr>
<tr>
<td>Learning to make paper-cuts project</td>
<td>Class B</td>
<td>Structured</td>
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<tr>
<td>Decided by students</td>
<td>Class A and B</td>
<td>Unstructured</td>
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Interviews were recorded and transcribed. All of the data collected including the transcripts and the qualitative survey were analyzed using interpretive analysis (Hatch, 2002) to look for themes and patterns. This type of inductive analysis approach provides researchers an opportunity to construct meaning from data and for ‘making sense of the social phenomenon they are studying’ (Hatch, 2002, p.180). The specific steps for data analysis are: 1) read and examine the data with open coding. This allows the investigator thoroughly analyze the data and identify concepts within raw data with open-mindedness; 2) read codes and identify semantic relationships by grouping codes into categories based on nine relationships (Spradley,1980); 3) create domains based on semantic relationships (Hatch, 2002); 4) identify salient domains and assign them a code (Hatch, 2002). This is a process of “data reduction” (Miles & Huberman, 1994, p.10), the goal of which is to narrow the focus of the analysis by studying the categories emerged from domain analysis and to decide which domains will be salient to the study; 5) reread data, refining salient domains and keeping a record of where relationships are found in the data (Hatch, 2002); 6) decide if domains are supported by data and search data for examples that do not fit with or run counter to the relationships in your domains (Hatch, 2002); 7) complete an analysis within domains by looking for complexity, richness and depth within domains (Hatch, 2002); 8) search for themes across domains (Hatch, 2002), which generated the findings as follows.

4. Findings and Discussions

4.1 Students’ Perceptions of Project-Based Instruction

This section reports students’ evaluations of PBI based on the analysis of the interviews, surveys, project diaries and projects.

Enjoyment, Engagement, and Motivation

Based on the interview data and survey results, all of the students agreed that they enjoyed doing projects. They referred to doing projects as fun breaks from their repetitive school works. Students stated that projects provided with them the opportunity to do something fun and creative, which then adds to the diversity of their class format. The following excerpts from the interview show how they thought of PBI.

Student I: I think it’s fun. It gives us a break from like just doing work, work, work after work. It gives us a chance to do something fun. Just relax on doing so much works over weeks. Student D: I like the projects better. It’s different. I think you should do like, you should do to keep
the assignment where they are but every now and then, switch it a little bit, do like a little project.

Students prefaced such sentiment with their thoughts on doing the same format of assignments every day because Chinese class was considered boring. As a result, they were not actively engaged in learning and some even began to misbehave in class. Several students reflected in the interviews that they talked to each other in class when they were not supposed to or went to websites irrelevant to the lessons when they got bored with their work.

Another reason students reported in favor of a PBI approach was due to its connection to their interests. They believed that it was important and more interesting to choose projects closely relevant to what they like. Three students, for example, researched Chinese food for their last projects because they enjoyed Chinese food and going to Chinese restaurants. For most students it was fun to learn about different foods and the language together. When asked what project they liked most in the class, six out of nine students chose the project about finding a Chinese name, which they considered entertaining. This is consistent with the finding from the existing literature which stated that PBI encourages motivation, helps students become more involved in learning and makes their learning experience fun (Beckett, 2005; Gu, 2002; Tessema, 2005; Tomei, Glick, & Holst, 1999).

Enhanced Understanding towards Chinese Culture

67% of the students (n=6) expressed the view that doing projects helped them improve their understanding of Chinese culture. Their desire to learn more about the culture is one of the primary reasons for students to appreciate project works. This finding confirms previous findings concerning the benefit of PBI in helping students gain cross-cultural knowledge (Abrams, 2002; Bateman, 2002; Carter & Thomas, 1986; Gu, 2002; Wu & Meng, 2010). Students especially liked the projects selected and designed by themselves, through which they had the opportunity to explore interesting things about China and learned about many aspects of China that they did not know before. For example, topics selected by students included popular sports, martial arts, Hip pop, and lives of high school students in China. The following is from an interview with student K who researched popular sports in China.

We got to pick the topic we want to do. I like the project designed by yourself...Because we used to make our own assignments and make it in our own way, and researching the information... That's why I chose that project coz around the world, sports are very different. They have
different sports that are popular. I want to know what is popular in Chinese, what sport is popular. Coz I know in China, they base around technology a lot. So I thought their sports would probably be like built-in stuff, but I found out that was Ping-Pong, table tennis.

Improved Language Skills

PBI has also been hailed for its affordance to improve target language skills (listening, speaking, reading and writing) (Gardner, 1995; Fragoulis, 2009; Hilton-Jones, 1988). In one of the survey questions, students were asked to select one project that they learned the most from, and then provide the reasons for choosing that project. Despite the fact that there were a variety of choices from ordering Chinese food in a restaurant to self-designed projects, the reasons given were the same, that is, they learned new words, sentence structures, and the language for communication. In addition to the four language skills (i.e., listening, speaking, reading and writing), students also believed that PBI helped them practice handwriting of Chinese characters and improve their ability to recognize Chinese characters. The following excerpts from the survey explain students’ evaluation of how PBI helped their language learning.

Student K: I learned from all of the projects because I learned a lot more about the Chinese culture and new words, sentence structures, characters and much more.

Student R: I learned most from “A Study of Chinese Names” because I learned three new characters and memorized them perfectly.

Evidence of improved language skills was observed in the use of mixed languages in students’ project products and diaries. In particular class A (students with one year of Chinese language classes) demonstrated more use of mixing of English and Chinese in their assignments compared to class B (one semester less of Chinese language than class A). Students practiced their learning either by putting Chinese words (characters or pinyin) they learned in an English sentence or English words in a Chinese sentence even when the use of Chinese was not required. For example, in the last project designed by students themselves, students L translated her English poem into Chinese and in the introduction of her project, she wrote:

“Wǒ decided to use wǒ own poem and translate tā into zhōngwén. Tā jiào Xiǎngshòu xǐníán” [we decided to use our own poem and translated them into Chinese. It is called enjoy New Year].
Student R expressed his affection for Kung Fu and used sentences with both Chinese and English such as "功夫看来 (appears) 很难 (Difficult)" [Kung Fu appears to be difficult] on his PowerPoint presentation.

Projects Offer Insight into My Own Personality

78% (n=7) of the students reported that both teacher-structured and unstructured projects offered insights into students' personality. Student I said that she liked projects which allowed them to create, draw, and color their crafts using bright and colorful things as shown in the interview excerpt below.

Teacher: What is the most important thing for you in doing projects?
Student I: That is something I enjoyed doing it if is fun and creative. Like if I can put my personality into it. Like when we made the door hanger and the fans, we had to write characters on it. And we also got to draw other stuff and make it colorful.
Teacher: So you think that coloring and drawing connects to your personality?
Student I: Because I am a bubbling person. I like bright colorful things...so like when we did the fans, I got to add more colors to it and like different designs on it, along with the characters.

Most students chose a particular topic because it connected to their interests, which also reflected their personality. For example, student K loved football and enjoyed playing aggressive in sports activities. She thought it was natural for her to pick a sports topic. As stated earlier, several students also researched Chinese food and they considered themselves adventurous, people who like to try new things. Researching all kinds of Chinese food foreign to them reflect their personality of tending to try new things. Although not related to his learning interests, student R found that through project activities, he had time management issues and tended to spend a lot of time researching and much more time processing knowledge. Therefore, rather than working on projects at school as most other students did, he always brought his projects home so he could finish them on time and most importantly to practice new characters he came across in the projects. Only two students interviewed said that they are not sure if projects offer insight into their personalities. One of the students thought that the selection of their research topics were random and could not really be connected with his personality. The other believed that the project he selected could offer insight into his personality, but he did not know in what ways.
The Project Diaries for Evaluation

Most of the students (67%, n=6) acknowledged that project diaries were useful in terms of helping them review and evaluate what they had been working on in the week. They liked the project diaries for its reviewing purpose. However, students did not like recording their learning in Chinese because they required a lot more time to complete. A few students did not think that they had much feeling towards project diary as they only did it a couple of times. One student did it because it was part of classroom activities, but did not count towards their final grades. There were no right or wrong answers for the project diary as a few students had hoped. Another student pointed out that she did not like the part of recoding what phrases or expressions people use because people around them do not speak Chinese. Overall, students tend to be less passionate towards project diary than project works themselves. The excerpts below are three students’ responses from the survey when they were asked to elaborate their experiences with the project diaries.

I like project diary because:
- It allows me to keep track of my experience.
- It gives me time to write down the things I learned instead of forgetting.
- It helps me to know what I did in that week.

Difficulties Encountered in Doing Projects

Although all of the students acknowledged the important role that PBI played in helping them learn Chinese, they noted difficulties faced in the process. Language issue was reported as the major difficulty. Based on the interviews, students expressed the idea that they really liked projects, but doing projects in Chinese was hard. Making dialogues in Chinese and recognizing and writing Chinese characters were the most frequently mentioned difficulties in doing projects. Students thought that Chinese sentence structures are difficult because they are backwards. For example, student R said:

Because Chinese sentence, the structure of the sentences are way different than English and sometimes you don’t need the words inside the sentence. Student O: Because I don’t understand how to write it. I try to think English, but I forget so many stuff backwards in the Chinese way.

Most of the students were used to reading and writing pinyin which is Romanization of standard spoken Chinese. They had not developed the ability to
recognize characters, even though they understood that pinyin was only for pronunciation purposes. When students were told to read texts that contained Chinese characters, they struggled and asked for pinyin translations from their teacher. Students felt that most Chinese characters looked alike and found it difficult to memorize the meaning of each Chinese character. Other language issues included using words not learned yet for projects, pronunciation, and tones. Previous literature has shown that PBI provides students with authentic learning experiences by exposing them to a target language in real situations (Gu, 2002; Ke, 2010; Stoller, 2006). In Beckett's (2005) study, some students perceived PBI positively because it required ESL students to learn to think in English. In this study, however, most of the students demonstrated difficulties in using and thinking in Chinese. They considered it challenging to use Chinese to do projects, but meanwhile admitted that it was what learning was supposed to be. These difficulties students reported with the Chinese language suggest that language proficiency has a major role in determining the success of PBI implementation. To ensure the positive outcome of PBI, teachers should consider the levels and capacities of the students and tailor the projects to best meet the needs.

Students also said that searching and collecting information and familiarity and knowledge of the topic were the key factors for the successful completion of project work. A few students revealed that it was difficult to find information for their topics. Students changed their project topics due to limited information available and decided on certain projects when they knew that they could gather the information needed, pointing to a need for teachers to keep in mind the availability of resources when designing projects. Students also found it challenging when sometimes lessons and school works focus on different information/knowledge from their projects. It means that they had to work on two different kinds of learning at the same time. Several possible solutions to remedy these difficulties were also found. It would have been easier if students had learned or had known about the topic before they started the projects. That is, projects should be based on vocabulary from the lessons so students can review what they have learned and go back to the lessons and school works for references if needed. Another way to make it less difficult for students was to make projects activities done incrementally with language (e.g. vocabulary and grammar) being taught. Lastly, students indicated that it was meaningful for them to learn languages for communication and for daily use through projects. The following excerpts show what kinds of projects they want to work on.

Student L: I think learning different ways to say and look at type of objects we use every day.
Student S: I think we should do more on shopping. Like when we go to stores, “I want, can I get this or that”? I think more on that, getting clothes. Like when we go to mall, asking stuff. I like shopping. I like clothes. So that would be better if I can learn about that thing, how to communicate when I go to store, like a fashion store, like the mall.

4.2 Teacher’s Perceptions and Experience with PBI

This section discusses the teacher’s perspective on implementing PBI and her learning in the process, based on an interpretive analysis of classroom observations and the teacher reflective journal, including project products and students interview transcripts.

PBI as A Collaborative Learning Pathway

The analysis of the teacher journals and observation reveals that during the planning period of PBI, the teacher talked and exchanged ideas with students about possible project topics. The planning of PBI was not an individual work by the teacher, but a collective effort with the students. Students shared with the teacher what they wanted to learn in the class and many topics became students’ own projects at the end of the semester. Several of the class project topics were actually inspired and suggested by the students themselves. Introducing family members in Chinese, for example, was a project suggested by students. In the process, the teacher was a learner of students’ ideas and a partner of students in developing projects (Simkins, 2002).

The teacher also discovered student learning through PBI. When students displayed their project products, the teacher was amazed at students’ achievements and the learning they demonstrated through PBI. The teacher herself thus felt accomplished and confident about her teaching, especially with PBI. The students appeared to have enjoyed and were motivated by PBI, which was in line with students’ responses. For example, after the Chinese names project, students started addressing each other by their Chinese names. One student came early to class almost every day just to write his Chinese names on the board. During the interview, the student reflected that he felt good about practicing what he had learned. The teacher agreed with the students that PBI provided opportunities to use the language rather than just memorize vocabulary and grammar rules for the purposes of completing assignments. Furthermore, while students were practicing their language skills, they also saw their language learning needs in Chinese (Hilton-Jones, 1988). Most of them thought they were not good with writing and memorizing characters and making dialogues, so they wanted to learn more about sentence structures and characters as well as expressions and words for daily life use. As such, PBI provided a space for both the teacher and the students to learn
from each other and to see the needs for further improvement.

**Responsibilities of the Teacher**

The analysis of the teacher’s journal and observations revealed that throughout the project activities, the teacher played the roles of providing guidance and keeping students focus on projects without being distracted by internet. As noted earlier, students had difficulty with doing projects using Chinese. They tended to transfer their L1 (English) word order to L2 (Chinese), which was supported by previous literature (see Jiang, 2011; Yuan, 2013). For instance, in “telling a story about oneself project”, student J said: 我的手机可以照相，因为它有相机背后它 [wǒde shǒujī kěyǐ zhàoxiàng, yīnwèi tā yǒu xiàngjī bèihòu tā: My cellphone can take pictures, because there is a camera on the back of it], whereas a common way to say it in Chinese is: 我的手机可以照相，因为背后有相机 [My cellphone can take pictures, because on the back there is a camera].

The use of English syntax commonly occurred with students in Class A who were required to use more target language and sophisticated sentences as they were at their second semester, a semester ahead of Class B. The teacher usually worked individually with students till they could express themselves in Chinese sentence structures originally with English syntax. In answering students’ questions, the teacher also talked to students in Chinese by using words and phrases from the projects that they were working on. Students also asked for the teacher’s help with the target language in the middle of doing a project. As recorded in the teacher observations, the teacher, at the beginning of PBI, guided students to use online dictionary and read E-textbooks to help them adjust to self-study as some of the questions they asked (e.g., meaning of a word or a phrase) could be solved by the students on their own. In addition to the guidance in language, the teacher also reminded students of their tasks before they started doing projects in the lab so as to help especially those who had difficulty with managing time keep up with the rest of the class.

The technology enriched PBI allowed students’ access to computers and the internet in the classroom, which resulted in some students engaging in irrelevant activities online. The teacher had to make sure that students focus on their project activities. A similar finding was reported in Gu’s (2002) study. When some students got distracted by ‘the dazzling tools online’ during a webpage-making period in their project, the teacher had to guide students and redirect their attention to their works so that they can get relevant information for their projects (p. 202). These two responsibilities of the teacher (providing guidance and keeping students on track) match with what students perceived as the roles of the teacher in PBI. Based on the interview, students needed the teacher most to guide them with
steps and requirements in the projects and to keep them on track. Students admitted that it would be more challenging without the help of the teacher. In PBI, the traditional role of teacher as an examiner of students’ learning and the role of students as an examinee were abandoned in favor of a teacher-student relationship in which both work towards the success of the learner (Feuerstein, Rand and Hoffman, 1979).

Importance of Computer Skills

As noted earlier, this was a technology infused PBI, thus students’ computer skills played an essential role in their successful completion of project activities. During the process, students used computers and online resources effectively to gather data and complete projects. Their good command of computers in project activities was developed through their practices with online learning prior to PBI. As the class was held in a computer lab, students were provided with online learning opportunities using computers to do assignments. However, as documented in the teacher observation notes, at the beginning of the academic year before PBI started, the teacher noted that students had various difficulties in online learning, especially with the B group. They were constantly distracted with websites irrelevant to the lessons or late with their assignment submission. Some even did not know how to log into their computers, save their files, or submit their works through Black Board. Students felt left behind when dealing with assignments or tasks that required uses of online resources. To help students adjust to online learning environments, the teacher started individual tutoring with students during their assignments time, printed hard copies of daily and weekly class agendas, pair student up to let them help each other, and studied E-textbooks together with them. It was almost after a semester’s experience with computers that the students in class B gradually adapted to the use of computers and online resources. In this sense, students’ experience with computers and online learning may have helped them with the completion and their experience of project works.

5. Conclusion and Implications

This study applied PBI into teaching Chinese as a foreign language classroom to explore students’ and the teacher’s experiences and perceptions of the approach in CFL setting. The findings of the study suggest that PBI is a feasible and effective teaching and learning approach for American students learning Chinese as a foreign language. PBI changed the traditional way of teaching and learning that focuses more on language input to a way that promotes language learning by encouraging language use and output. By shedding light on how
Chinese language learners and the teacher perceive PBI, this study contributes constructively to the current CFL research, as well as foreign language education in general. For a better understanding of how PBI achieves the language learning goals with regard to communicative competence, cultural knowledge and teacher-student relationship, we will briefly summarize how this study addresses each of the research questions.

(1) How do students’ view project works? Based on students’ feedback, they enjoyed, felt engaged and motivated by PBI, and believed that PBI encouraged them to be creative and imaginative. PBI was also considered an activity that offered insights into students’ personality and reflecting their learning interests and habits, which further helps students’ self-improvement. Students also expressed that PBI enhanced their understanding of Chinese culture and improved their language skills as well as character recognition and memorization by providing them opportunities to practice the language and to learn new expressions and conversation phrases. However, students also reported that PBI was difficult for them, especially with the target language such as sentence structures and characters recognition and writing. Because of the challenges students faced with the target language, they were more certain about what they were not doing well and were able to see their language needs and thus expressed their hope to learn more about sentence structures and characters as well as spoken Chinese. (2) What are the teacher’s experiences and perceptions of PBI? Likewise, the teacher agreed that PBI brought many positive outcomes to students’ learning by engaging and motivating them in doing project activates, providing them opportunities to learn about target culture and practicing the language. In addition to language skills, the teacher found the importance of computer skills in PBI, especially for technology infused PBI activities. More importantly, the teacher gained a collaborative relationship with students through PBI. The teacher was able to shift from an examiner of students’ learning to a learner and facilitator who could learn from students’ knowledge and see their language needs.

These findings also lead to a number of implications for educational practice and research. First, PBI offers foreign language (FL) educator a practical tool to integrate culture teaching and learning into the FL classroom. Previous studies reveal that many foreign language educators devote little time to developing students’ understanding of target culture because they believe that it is impossible to integrate culture teaching in the FL classroom, particularly at beginning levels of instruction (Fox & Diaz-Greenbug, 2006; Sercus, 2005). This study shows that adopting PBI can provide beginning students opportunities to explore target culture, helps students enhance cross-cultural understanding and motivate their learning of target culture.
Another pedagogical implication for teachers is that when introducing PBI or other learning activities to students, they should take into consideration students' language competence and tailor projects to best meet their needs and at the same time provide them space to learn and practice the target language. Success of PBI and students’ perceptions of PBI are closely related to students’ language proficiency as indicated by the findings of the current study, where students reported difficulty they had with PBI due to limited language skills. To make it less challenging for students, perhaps project activities can be designed based on the language taught from the lessons so students can go back to their lessons for references or projects can be done incrementally with the language being taught accordingly. Moreover, for technology enriched PBI, teacher practitioners should make sure that students have sufficient computer skills to carry out PBI activities. In addition, teacher practitioners should keep in mind the availability of the resources when designing projects so that students do not struggle too much with finding relevant information and feel the need to change topics in the middle of the project.

With respect to the project diaries, the students in this study understood their pedagogical purpose but they also pointed out aspects that they do not like. Since this is the first time that the teacher researcher implemented PBI in a foreign language setting, it is important to improve it for future implementations catering to the contexts and students’ needs. Students in this study disliked project diaries mainly because they felt that project diaries were not “real” school assignment but extra work. Future application may consider project diaries as part of regular graded school work. Moreover, rather than asking students to record what they learn from others’ conversations in the target language outside the classroom (for second language setting), it may ask students to pay attention to what other students say in the classroom or how teachers use the language.

A key to this research is that it was conducted by a teacher in the context of her own practice, which contributes to the “authenticity and practicality” (Mearns, 2012, p.186) of the findings. Through her own research activities, she successfully improved student engagement and learning and thus validated the benefits of PBI in teaching CFL as were reported in the literature. The implementation and evaluation of PBI bridges the gap between academic research findings and classroom applications, and also adds to the existing body of literature on PBI, especially in CFL instruction setting. This research is expected to inspire more language practitioners to do classroom or school-based research in order to improve language teaching and learning experiences. Furthermore, although the teacher researcher initiated the research cycle, students contributed constructively to the process as well. The suggestions given above (e.g., lessons and projects
carried out at the same time and improvement to project diaries) may serve as the base for the next action and learning cycle.

Despite the successful implementation of PBI in CFL context, this study has its limitations. First it is an explorative study in nature, aiming to elicit students' and the teacher's voices and experiences of PBI. PBI as an action intervention was added to the existing school curriculum, supplementary to other teaching activities. Thus no exam scores or language tests were collected to examine PBI outcomes because we could not rule out the effects of other teaching activities on students' learning and tests performance. Additionally, these students were still at their first year of learning Chinese, no proficiency tests were been carried out to assess their linguistics performance. Future studies could look into experimental designs, assessing effectiveness of PBI based on students' linguistics performance reflected in proficiency tests such as HSK and AP tests. Second, because this is a small-scale study conducted in a classroom setting, the generalizability of the research findings is limited. Future studies can trial PBI approach with a wider range of students including groups of different grades and backgrounds. In addition, the projects carried in this study were short-term project works (two weeks per project). Future study can examine students' perceptions of long-term projects and see if students hold the same opinions in comparison with short-term projects. Above all, more research studies are needed to investigate PBI and other teaching approaches in CFL instruction.

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Notes

1. Funding from FLAP ended for Hughes High School in 2012. However, other schools in Cincinnati Public School District are continuing to offer Chinese classes and have increasing student enrollment.
2. For a historic review of PBI and its introduction to second and foreign language education, see Beckett (1999).
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Global.

**Appendix A: Project Sample - A study of Chinese names**

*In this project, you will have the opportunity to:*
1) Learn the culture of Chinese surnames
2) Compare naming traditions/cultures between China and U.S.
3) Find yourself a name (including first and last names) in Chinese characters
4) Prepare for an oral report of your findings.

*The following websites are some information for you reference* (note: you can conduct your own research during our lab sessions)


You have two weeks to work on the project (Due Jan. 23rd, 2012)

**Presentation:**
- You have ten minutes to present your findings.
- Present to the whole class about
  - what you learned about Chinese names (5 points)
  - similarities and differences with naming cultures in U.S. (5 points)
  - your name in Chinese characters and pinyin and what they stand for (10 points)
  - Rationale for choosing such a name (5 points)
- Speak in a clear and audible voice with appropriate presentation manner (e.g. eye contact, gestures, etc.) (5 points)
Appendix B: Survey Questions

1. Name:
2. Gender:
   O Male     O Female
3. How long have you been learning Chinese?
   O 2 semesters    O 3 semesters    O more than 3 semesters
4. I take Chinese class because:
5. How do you evaluate your learning in this class?
   O Excellent     O good        O fair        O not good        O poor
   Based on what criteria, did you choose this type of evaluation?
6. The project I liked most was ____________________, because:
   The project I learned the most from was ____________________, because:
7. Doing projects help me improve (please circle those apply to you):
   O My understanding towards Chinese culture
   O My speaking skill in Chinese
   O My listening skill in Chinese
   O My reading skill in Chinese
   O My writing ability in Chinese
   O My character writing and recognition
   O Others:
8. How do you feel about project diary?
   O I like project diary because:
   O I do not like project diary because:
   O Others:
9. Which part of this class has helped you learn most?
10. Which part of this class has got in your way or hindered your learning?

Appendix C: Interview Questions

What do you think is the most interesting project you have done in this class and why?
What is particularly important to you during the process of selecting and presenting what would you research or do?
What problems did you encounter in doing projects? How did you solve them?
What do you find the most difficult in doing project works in Chinese language?
Do you think the project you designed offers insight into your personality? If so, how?
What do you find most challenging in learning Chinese?
What do you wish to learn that you have not learned yet or have not learned sufficiently?
What do you need from teacher in order to help your learning of Chinese?

Appendix D: Project Diary (adapted from Beckett and Slater, 2005)

| Week | Name
|------|------
|      |      

**Activity**
- Things I did this week:
- Places I went to:
- I looked for and found:
- I tried to look for but did not find:
- I observed:
- I spoke Chinese to:
- I talked Chinese about:
- I read:
- I wrote:

**Knowledge and Skills**

<table>
<thead>
<tr>
<th>Language</th>
<th>Content</th>
<th>Strategies/Skills</th>
</tr>
</thead>
<tbody>
<tr>
<td>Language I noticed people using (vocabulary, expression, grammar, etc.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>My Learning of new expressions and vocabulary</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Content (new information learned in the project)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-reflection (what do you like or dislike about this week’s project and why; what do you think you can do to improve your learning)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>