

**Choosing between methodologies:  
An inquiry into English learning processes in a Taiwanese indigenous school**

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*ABSTRACT: Traditional, cognitive-oriented theories of English language acquisition tend to employ experimental modes of inquiry and neglect social, cultural and historical contexts. In this paper, I review the theoretical debate over methodology by examining ontological, epistemological and methodological controversies around cognitive-oriented theories. I also present a socio-cultural research study on English language learning in a Taiwanese indigenous school as an example for discussion. Findings suggest that non-experimental modes of inquiry that employ multiple methods for multi-layered analysis are productive and appropriate. Socio-cultural theoretical lenses and methodological instruments may liberate research in English language studies and broaden our understanding of English learning and teaching.*

*KEY WORDS: English learning; indigenous; methodology; socio-cultural research.*

## INTRODUCTION

Conventional psychological theories of cognitive development have tended to focus on the universal structure of the mind rather than on cultural variation and to account for behavioural and mental development through a dual mind/society paradigm. For example, in second language acquisition (SLA) and English as a foreign language (EFL) studies, there has been some tension over “nature-nurture” debates. Should language learning be regarded as a question of innate predispositions that involve a form of genetic pre-programming, such as the Chomskyan theory of an internal language acquisition device (LAD)? Or should language be seen as arising from social and cultural experience?

Among those traditional cognitive-oriented theories, the Chomskyan perspective on language (Chomsky, 1968) appears to have generated the most controversy. This theory asserts that language is the most distinctive cognitive skill of human beings and that research on the origins of language should be the centrepiece of cognitive science to provide insight into the human mind. However, the literature (for example, Hymes, 1972; Pinker, 1984; Tomasello, 2003; Watson-Gegeo, 2004) generally agrees that Chomskian theories fail to provide a holistic picture of learners’ use of natural or foreign language. Among the challenges to internal mechanisms of language acquisition, Vygotsky-inspired socio-cultural approaches with different choices of methodologies to those of conventional studies of language learning have brought culture back to the central stage of inquiry.

In recent years, there has been growing recognition in the literature that language learning is a socio-culturally constituted practice and that culture plays an important part in SLA and EFL (for example, Donato, 2000; Kramsch, 1998; Lantolf, 2000; Lin,

2008; Lee & Smagorinsky, 2000; Smagorinsky, 2011). Socio-cultural approaches, which regard culture as a core concern, have been increasingly used to explain students' learning and development (Cole, 1996; Lin, 2008; Nasir & Hand, 2006; Rogoff, 1990; Wertsch, 1995, 1998). However, tension still exists over theoretical and methodological debate in English language studies. There is a need for in-depth discussion of ontological, epistemological and methodological positioning in English language research to explore how adopting certain approaches in the design of research instruments may improve or limit research and ultimately contribute in meaningful ways to our understanding of English language teaching and learning.

This paper aims to evaluate different research approaches at a theoretical level by examining the controversies conventionally associated with them and by reflecting on key aspects of their ontology, epistemology and methodology. This paper reviews the cognitive theories that preceded Vygotsky's work and began to influence theories of learning in the 1980s. In addition, the paper discusses neo-Vygotskian studies that assume the social formation of mind and the recent move in socio-cultural approaches to the study of SLA and EFL. To clarify my methodological argument, this paper briefly highlights an example study on indigenous students' EFL learning processes in Taiwan to show how adopting this socio-cultural theoretical framework to design appropriate research instruments can advance research in English language studies.

## **COGNITIVE VERSUS SOCIO-CULTURAL VIEWS OF MIND**

Cognitive approaches in psychology tend to employ experimental methods rather than interpretive methods to explore the human mind. The psychologists associated with the "cognitive revolution" in the 1960s (Lin, 2008) viewed the mind as a self-sufficient organ that functions independently of its socio-cultural environment. Accordingly, this school of psychology saw language development as relying on chemical and biological functions and treated the mind as a central processor. Cognitive psychologists viewed stimuli as noise that interferes in experimental studies and that should be eliminated (Shweder, 1990). In the 1980s, criticisms of cognitive psychology emerged in, for example, developmental and cross-cultural studies. Shweder's (1990) insightful remarks characterise one aspect of the challenge. From the viewpoint of cultural psychology, he argues that the cognitive revolution relies on "an inherent central processing mechanism" that denies the mind's relations with its socio-cultural environment and neglects the irreducible, fluid and intentional nature of the human mind in favour of a discrete, individualistic model. A central aspect of Shweder's argument is the notion that intentionality is more than a mechanical process, which highlights the dynamic nature of human interaction with socio-cultural environments and the human search for meaning.

In the field of language acquisition, Tomasello (2003) questions Chomsky's notion of generative grammar and suggests that a language acquisition theory should invoke social-cognitive processes that originate from outside the domain of language itself. More importantly, Hymes (1972) proposed the notion of "communicative competence" and challenged the cognitive mechanism in Chomsky's linguistic theory, one that tends to ignore the socio-cultural dimension of language use. Hymes argues:

It takes the absence of a place for sociocultural factors, and the linking of performance to imperfection, to disclose an ideological aspect to the theoretical standpoint...The controlling image is of an abstract, isolated individual, almost an unmotivated cognitive mechanism, not, except incidentally, a person in a social world. (Hymes, 1972, p. 271)

Other scholars, particularly Vygotsky (1978, 1981), also challenged the notion of an internal cognitive mechanism. Vygotsky sought to understand the relations among language, mind and culture by starting with the social world and bringing what cognitive psychologists viewed as interfering noise back into the picture. Following Vygotsky, neo-Vygotskian studies, which assume the social formation of the mind, also present major challenges to individualistic approaches to psychology. They perceive the human mind as an open-structure-in-practice, mediated by languages as psychological/cultural tools or mediational means, and hence argue that the inherent properties of languages are culturally, historically and institutionally situated. The combined efforts of neo-Vygotskian scholarship and the growing recognition of social and cultural influences on language learning have shifted the individualistic orientation of psychology to account for social and cultural forces (Donato, 2000; Kramsch, 1998; Lantolf, 2000; Lin, 2008).

For example, Scribner and Cole's (1981) work on Vai literacy in Liberia provided a broad framework to understand the relationships between socio-cultural activities and psychological processes that are involved in literacy. They argue that school and non-school literacy practices are significant for people's everyday lives, leading them to define a "practice account of literacy" (Scribner & Cole, 1981, p. 236). Their findings suggest the importance of considering literacy "a cultural tool imbued with ideology and employed toward particular social ends", rather than "a technical skill independent of the context of use" (Smagorinsky, 2011, p. 119). A practice account of literacy is significant, not only because it widened the scope of existing theories about literacy and cognitive skills, but also because it helped to inform our investigation of English language teaching and learning. The Vai study was especially influential with respect to taking the research design "outside of the classroom" to examine language learning in its historical, cultural and institutional settings.

Building on the argument that language is embedded in social and cultural practices, I now turn to Heath's (1983) work on literacy learning in North America, which engendered English language learning both inside and outside the classroom. Her ethnographic study explored how English language learning takes place in home, school and community contexts among children of different social groups and class backgrounds. Her findings suggest that a "discontinuity" emerges between children's home and school learning experiences, leading to educational failures among children from working-class backgrounds. Children's literacy was embedded in how they practised language with their parents at home and, hence, was culturally situated. Her study sheds light not only on the relationships between first and second languages and cultures but also on the different contexts students from various class and ethnic backgrounds encounter. As Smagorinsky (2011, p. 121) argues, both Scribner and Cole's and Heath's studies "pioneered the movement toward understanding literacy in community settings" and "helped to shape studies that focus on literacy as multifaceted and not necessarily driven by formal academic priorities or practices."

Among neo-Vygotskian scholars, the cognitive anthropologist Jean Lave (1988, 1996) has been at the forefront of contributing to “situated learning theory”. As Lave and Wenger (1991) argue, the tenets of situated learning are that all activities are situated, such that “agent, activity, and the world mutually constitute each other” (p. 33). This learning theory challenges conventional understandings of cognition and implies a social construction of mind with new implications for learning in everyday practice. Learning is, hence, not a discrete and isolated activity but an integral part of active participation in a broad “community of practice” (Lave & Wenger, 1991; Wenger, 1998). This concept is significant because it not only echoes notions such as “the practice account of literacy” (Scribner & Cole, 1981), “everyday cognition” (Rogoff & Lave, 1984) or “communicative competence” (Hymes, 1972) but also sheds light on our methodological arguments. Specifically, this concept suggests insightful theoretical perspectives on English language learning in terms of learners’ meaning negotiation and identity formation in their communities of practice.

Based on these arguments for a practice approach to literacy, the mutual embeddedness of language and culture, situated learning models and the concept of communities of practice, we move away from individualistic approaches to human cognition in favour of understanding language learning as a socio-cultural process situated in everyday, lived-in worlds. This study therefore treats language as an open structure in human practice, such that an examination of EFL learning must be conducted in the context of human action.

## **CHOOSING BETWEEN METHODOLOGIES**

In the tension between the approaches of natural and social scientists, the former privilege describing and theorising how the physical world functions and may even disparage the approach of the latter, who frame their research mainly in terms of a complex, “meaningful” human world. Twentieth-century mainstream psychology had its roots in behaviourism, and its philosophical approach relied on key aspects of the positivism of the 1920s (Harré & Gillett, 1994). Positivists’ ontological and epistemological worldviews lead them to employ experimental methods that involve mainly quantitative approaches, which post-positivists also tend to use in a modified manner.

However, a growing number of constructivists assert that the principal features of intentional or constituted worlds are subjects, objects and the interpenetration of human beings’ identities with their socio-cultural milieus. Thus, these features cannot be analytically separated into independent and dependent variables. Constructivists claim that this approach constitutes a new paradigm for socio-cultural psychology, transforming it into an interpretive discipline with different notions of causality and validity to those of positivism and post-positivism. Although, as McBurney (1994) argues, causality is difficult to determine in correlational research, a term that characterises experimental methods, the use of causation as a way to understand human behaviour has long dominated positivist, scientific traditions. In contrast, constructivists see their hermeneutical approaches as an attempt to discover interpretations of behaviour rather than its causes. Concerning validity, positivism and post-positivism assume an inexorable objectivity, whereas constructivists consider

truth to be partial and fluid, which implies that some methods are more appropriate than others for research on the human construction of social reality.

In the last two decades, alongside the emerging constructivist position and the development of situated social theories (for example, Lave, 1988, 1996; Lave and Wenger, 1991; Wenger, 1998), the study of SLA and EFL has ed socio-cultural contexts, so that cultural issues concerning gender, identity and representations are now investigated (Donato, 2000; Kramsch, 1998; Lantolf, 2000; Lin, 2008; Lee & Smagorinsky, 2000; Smagorinsky, 2011). In contrast to traditional psychological perspectives that focus on human cognition and behaviour at the individual level, this perspective requires a shift from the human mind as the sole unit of analysis for human thought to a recognition of the socio-culturally constituted practices in which human thinking and behaviour develop (Lin, 2008; Nasir & Hand, 2006; Scribner, 1997). Following this theoretical and methodological framework, Rogoff (1995) proposed that a socio-cultural approach involves the observation of development along three planes of analysis: personal, interpersonal, and community processes. “These are inseparable, mutually constituting planes comprising activities that can become the focus of analysis...but with the others necessarily remaining in the background of the analysis” (Rogoff, 1995, p. 139).

## **AN EXAMPLE STUDY**

To clarify my theoretical and methodological arguments, I chose data for analysis and discussion from an indigenous school that is a part of a larger socio-cultural study on EFL learning in Taiwan (Lin, 2008). This study investigated differences in high-school students’ experiences in EFL learning and their relationships with institutions (for example, classroom and school), community (for example, family and ethnic culture) and the broader level of state economy and historico-political forces. The overarching question guiding this study was the following: “What are indigenous students’ everyday situated experiences of, and access to, English?”

### **Setting and participants**

Taiwan is an island with an ethnically mixed population composed of Hokkien (69%), Chinese Mainlanders (15%), Hakka (16%) and indigenous people (2%). There are officially fourteen indigenous tribes distributed around the central and eastern regions of Taiwan. The Paiwanese tribe under study is the third largest, with a population of approximately 78,000 (GIO, Taiwan, 2012). The indigenous school, Mountainside (fictitious name), is located in a village near the mountain foothills in southern Taiwan. It is a comprehensive junior-senior school as part of the Taiwanese government’s focus on the educational rights of minority groups. The junior high school department consists of 13 classes and the senior high school department of 11 classes. The total student population is approximately 700 students. Mountainside is an indigenous boarding school (58% boarders), and 97 percent of its indigenous students come from the local Paiwanese village and other remote, mountain tribal communities (see Table 1).

Recently, the government’s focus on the educational rights of indigenous people led to Mountainside’s receiving financial support to construct modern educational

facilities, including new schoolrooms, a multi-purpose gymnasium and a standard metre track and field for athletic sports. The government funding has also made it possible for the school to offer subsidies for student tuition and boarding fees for indigenous students at the level of secondary education. The school campus and the community feature beautiful sculptures and paintings representing Paiwan's tribal customs, ranging from sculptures of three Paiwanese warriors in the central village square to paintings of local customs and history on the school walls. This artwork celebrates the ethnic and cultural identities (for example, athletic prowess) that play a vital role in Mountainside's underlying curriculum (Lin, 2008).

Locales	Classes	Gender	Population	Ethnicity (%)
<i>Mountainside</i>	Senior: 11	B: 159	Indigenous: 269	Indigenous: 97
		G: 130	Non-indigenous: 20	
	Junior: 13	B: 210	Indigenous: 403	Non-indigenous: 3
		G: 201	Non-indigenous: 8	

Note: 1. B =boys, G =girls, numbers estimated for the school year of 2005.

2. Ethnicity refers to fathers.

**Table 1. Demographic features of the indigenous school**

Indigenous people in Taiwan have been known for gifted singing, dancing and, in particular, athletic prowess. The annual athletic meeting in the village provides the best space for local people to demonstrate such gifts. Paiwanese people consider athletic sports as an aspect of shared community values and crucial to students' achieving their full potential. Through sport, a number of students in Mountainside strive for futures as professional athletes or coaches, some being sent to departments of physical education in universities without entrance examination and little by way of academic qualification to match their athletic career aspirations. Athletic prowess is collectively considered as their ticket out of poverty, toward dignity, as evident in a Paiwanese participant's (Jack) interview account detailed later.

This study invited two English teachers (Ms. Lin and Lu) at Mountainside and two classes to take part in this research. Ms. Lin does not identify as indigenous, whereas Ms. Lu was born in the village and shares a Paiwanese identity with her students. This identity enables Ms. Lu to use her mother tongue in class and to refer to Paiwanese cultural customs in some lessons. Ms. Yang, the third English teacher who works in the senior high school department, also volunteered to participate in the interview phase. Her Paiwanese identity and humble family background afforded this study invaluable insight into the reasons many Paiwanese students encounter difficulties in learning English.

## Methods

To develop appropriate research instruments for socio-cultural analytic purposes, I used Rogoff's (1995) three planes of analysis, in which different planes call for specific methods. I adopted a multi-method approach that included qualitative and quantitative methods. The first method deemed appropriate was historical analysis, which included an informal visit to local communities to investigate the broad political, economic and historico-cultural issues related to English learning at state or community levels. Second, at the community plane of analysis, questionnaires

adapted from Scribner and Cole's (1981) study were administered to students, teachers and parents to gather information on individuals' English learning history, everyday use of the English language and demographic details. Third, on the interpersonal plane, classroom observations were used to map pedagogy in the context of teacher-student interactions. Finally, on the personal plane, interviews were undertaken with students, teachers and parents to provide a deeper understanding of the students' social, biographical and career aspirations and to chart the socio-cultural influences that motivated their English language practices. Below, the outcomes of this study are briefly presented, and whether this socio-cultural methodological stance enriched our understanding of indigenous students' English learning processes is discussed. Given the richness of the findings, I focus on qualitative data analysis, as illustrated below.

## **Findings and discussion**

### ***Historical analysis of the indigenous social group***

The indigenous people mostly dwell in rugged mountains, where they practise traditional hunting and farming lifestyles, and have been labelled "mountain people" (*shan-di-ren*) by Han Chinese migrants (Thompson, 1984). The Taiwanese government did not officially use the current terms of "aborigine" or "indigenous people" until 1995. Each social group in Taiwan has a native dialect and specific cultural roots, and the Paiwanese group is no exception. The Paiwanese tribal language is spoken by the older generation of grandparents as their everyday language. Younger Paiwanese parents and students tend to speak Mandarin (the national language) in everyday life, including at school. Among their many cultural features, the Paiwanese group is distinguished in terms of arts and handicrafts, such as earthenware pots, glass beads and woodcarvings. Furthermore, as Chiang (2004) stated, Paiwanese young people can sing and dance because they have seen and imitated these practices since childhood. Singing in particular is a favourite everyday leisure activity that has been passed down over generations. To motivate indigenous students' English learning, many English teachers have used singing as a pedagogical tool. This "cultural bridging" (Heath, 1983; Lin, 2008; Lin & Ivinson, 2012), as the case in Ms Lu's English class (below) illustrates, corresponds to the interpersonal plane of analysis, and the literature generally agrees that this bridging has both cognitive and affective significance for education (for example, Gay, 2000; Verplaetse & Migliacci, 2008).

Some 30% of Paiwanese people today believe in Western religions, especially what they refer to as Christianity and Catholicism, in addition to their traditional belief in ancestral spirits. Although many indigenous cultural practices appear to be in decline in the wake of widespread social and economic changes, these Western religions are still practised in the local community through activities such as weekly church attendance. These distinctive religions, in contrast to Buddhism or Daoism practised by other social groups in Taiwan, may implicitly or explicitly explain why Paiwanese students remain more interested in Western culture and the English language than their Han Chinese peers (Lin, 2008). However, social deprivation associated with poor regional employment leads to dysfunctional family structures, often characterised by single parenthood and alcoholism. Paiwanese students, hence, tend to underachieve in education in general and in English in particular (Kao, 2009; Lin, 2008).

As Scribner (1997) argues, all meaning-systems in the form of human language, belief and knowledge are products of human culture; “they are invented and transmitted through the social process and institutions by which succeeding generations reproduce and change their cultural heritage” (p. 269). Thus, reproduction and change characterise the history of human cultural development. Investigating change over time is, therefore, essential to understanding why a contemporary practice takes a certain form. Following Scribner’s argument, historical analysis was appropriate for this study because it helped to map the historico-cultural context of EFL learning in the social group under study. An analysis of ethnic and cultural variation is also pivotal in our understanding of how social and cultural values may be connected to EFL learning processes.

### *The interpersonal plane of analysis*

Vygotsky’s theory of the social formation of human minds suggests that learning takes place between people as an interpersonal category in a zone of proximal development (ZPD) (Vygotsky, 1978). The students, as novice EFL learners, are instructed by experienced English teachers at school, and this interpersonal level of analysis was used to give an overview of the classroom interactional styles of the two teachers in the study. Observational data were drawn from non-participant observations of approximately ten hours in the two classrooms (five hours in each) over a period of four months. I then analysed the general patterns of instructional practice and differences in pedagogic instruction across the classrooms.

In terms of the general instructional process, four interactional patterns were identified as common in the most frequently observed class hours: grammar-oriented pedagogy, the use of Mandarin Chinese as the dominant language, classic question-response-evaluation (IRE) structures of interaction, and direct and indirect interactional patterns of classroom control. A more interesting finding was one of the teacher’s bridging of her students’ home and school experiences in EFL teaching and learning. For example, Ms. Lu, a Paiwanese ethnic insider, periodically referred to her students’ culture in the classroom and used Paiwanese dialect and ethnic culture to introduce new vocabulary from the textbook in attempt to connect her students’ home and school experiences (see Extract 1 and 2 below). The word “M” stands for teacher’s use of Mandarin Chinese in Extract 1 and 2.

#### **Extract 1:**

1	T:	“grow”=
2	Ss:	= “grow” ((Students repeat together three times including its past tense.))
3	T:	(For example, what do you “grow” at home now?-M)
4	S1:	((speak Paiwanese dialect)) “ <i>Vasa</i> ”...
5	S2:	“ <i>Vaqu</i> ”. ((Other students mention different plants in Paiwanese dialect.))
6	T:	So “ <i>vasa</i> ” is carrot. ((Teacher repeats the word in Paiwanese dialect and
7		elaborates it.))

As the above Extract shows, after introducing the new word “grow”, Ms. Lu asked, “What do you grow at home now?” One student replied “*Vasa*” (carrot) in Paiwanese dialect (line 4). Ms. Lu took advantage of her Paiwanese identity by explaining that “*vasa* is carrot” in Paiwanese dialect (line 6). In an interview regarding why she used Paiwanese language in her English classes, Ms. Lu said:

I tend to use our mother tongue quite often [...] just to make my class relax. It seems that “a sense of intimacy” (qin-qie-gan) could be created by using our shared Paiwanese language, although I am not sure if this strategy helps in any way to promote their English learning.

Although Ms. Lu did not intend to use her mother tongue to enhance her students’ cognitive development, this type of improvisation and its appeal to the shared Paiwanese language appeared to connect the students’ home and school knowledge effectively.

Furthermore, in the episode of introducing the English word “family”, she led students to connect the previously learned word “reunion” and generated the phrase “family reunion”. She then initiated the question: “When do we, indigenous people, have family reunions?” (see below).

### Extract 2:

1	T:	Family reunion=
2	Ss:	=Family reunion ((Students repeat loudly for three times.))
3	T:	(How do you translate it?-M)
4	Ss:	“ <i>jia-ting-tuan-jiu</i> ” (family reunion) =
5	T:	=Ok, “ <i>jia-ting-tuan-jiu</i> ” ((repeats while writing on board))
6		Ok, when do we, indigenous people, have family reunions?
7	S1:	(On the wedding day.-M)
8	S2:	(And on the day they get engaged.-M)
9	T:	(On wedding day, the day they get engaged and what else?-M)
10	S3:	On “ <i>ching-min-jie</i> ” (Chinese Tomb-sweeping Day)
11	T:	What about our “ <i>wu-nian-ji</i> ”? (“Paiwan Five-Year Ceremony”)
12	Ss:	(Yes, we do. -M)
13	T:	(None of the villagers are sober, right!-M)
14	Ss:	((Students smile with apparent understanding.))
15	T:	(What about our “Community Athletic Competition”? -M)
16	Ss:	(Yes.-M)
17	T:	So we have “family reunion” on these events.

As shown in line 6 of Extract 2, the powerful “we” statement as “royal plural” (Edwards & Mercer, 1987), appeared to help initiate a common ground upon which teacher and students could comfortably interact. In line 11, the invocation of the Paiwanese Five-Year Ceremony had hit upon a highly valued, cultural activity in which Paiwanese family members return home for family reunions and religious purposes. In my fieldnotes after this observation, I had gained an impression on Ms. Lu’s teaching;

Fieldnote: The Paiwanese “Five-Year Ceremony” (“*Maleveq*” in Paiwanese dialect) is a unique cultural event in the tribe. It’s the most important ritual held every five years during which families will get together celebrating the return of Gods and ancestors while, at the same time, drinking their home-brewed millet spirit (*xiao-mi-jiu*) to their heart’s content. As this ceremony will be held this year, Ms. Lu seems to have raised a timely issue in the right season. (8th September, 2004)

The Community Sport Competition, another Pawanese cultural event, was also used (line 15) to bring together students' understanding of their home community in which sporting prowess was highly valued. For decades this has been an important, annual cultural occasion when family members come home. Both cultural events were used by Ms. Lu to arrive at a point of intersubjectivity whereby students effectively reflected upon and conceptualised the new phrase, "family reunion".

Arguably, this strategy entails not only a sense of "co-membership" (Cazden, 1988) but also a state of "common knowledge" (Edwards & Mercer, 1987) between the teacher and students. It was found that access to students' ethnic cultural knowledge and minority dialects were important socio-cultural resources that strengthened English teaching, even when the dominant school language was Mandarin Chinese. Moreover, this "cultural bridging" (Heath, 1983; Rogoff, 1990) in teacher-student interactions appears to have pedagogical significance, especially for students from linguistic or social minority groups, a finding that is generally supported in the literature (for example, Gay, 2000; Lin, 2008; Lin & Iverson, 2012; Verplaetse & Migliacci, 2008).

### ***The personal plane of analysis***

In keeping with socio-cultural perspectives, this study viewed the students as social actors in English learning communities of practice, in which they constantly negotiate meaning (Lave & Wenger, 1991; Wenger, 1998). Generally, individual students' active social positioning involving membership identities emerge both in English learning communities of practice and social groups. Within the former, individual students' learning trajectories are characterised as "central" or "peripheral". Membership of social groups may entail value conflicts between social identities, such as gender and language, and affect students' English learning. Students who are capable of building membership identities by negotiating within such communities of practice became central participants and learn English better than their peers do. Therefore, a detailed investigation is required to understand how students at the same school, with the same teacher and with access to the same cultural resources become central or peripheral participants. It is worth noting that, following Rogoff's (1995) suggestion, when we examine activities on a certain plane of analysis, we should keep the others in the background as inseparable, mutually constituting levels. With this understanding, even though individual students are the focus of the following inquiry, the broader social, cultural and historical forces in Taiwanese society should remain in the background of the analysis. In what follows, I intend to select students' familial resources, students' situated learning experiences and gender identity for discussion in order to map their learning trajectories in the English learning communities of practice (Lave & Wenger, 1991; Wenger, 1998).

At Mountainside, four indigenous students were invited to participate in the interview phase. The selection process involved taking into account teachers' knowledge, my observations, students' questionnaire responses and their academic attainment. Initially, a rough comparison of familial resources provided a general picture of the different resources that were available to help these students learn English (see Table 2). Based on their academic performance, Vincent and Vanessa were characterised as high achieving, central participants in English, and Jack and Dave were identified as peripheral students who failed to learn well.

School	Student	Parents	Ethnicity	Education	Occupation	Participation
<i>Mount- ainside</i>	Vincent	Father	Paiwan	Junior High	Peasant	Central
		Mother	Paiwan	Senior High	Clinic cleaner	
	Vanessa	Father	Paiwan	Vocational	Military	Central
		Mother	Paiwan	Senior High	Caretaker	
	Dave	Father	Paiwan	Primary	Mechanic	Peripheral
		Mother	Paiwan	Junior High	Domesticity	
	Jack	Father	Paiwan	Junior High	Labour worker	Peripheral
		Mother	Paiwan	Primary	Domesticity	

**Table 2. Familial characteristics of interviewees at Mountainside**

As shown in Table 2, Vincent and Vanessa were “haves” in terms of familial resources, although they were not as affluent as their urban counterparts. Both Vincent’s and Vanessa’s mothers were senior high graduates but had secured relatively well-paid jobs as a clinic cleaner and crèche caretaker, respectively, which played a pivotal role in helping their children to access English. The level of encouragement and engagement in their children’s education shown by Vincent’s and Vanessa’s parents was particularly exceptional within this community, as was their appreciation for the value of learning English. Both of the peripheral participants’ parents had no more than a primary or junior high school education and had very little experience or contact with English. In comparison with other social groups within Taiwanese society, education is relatively undervalued due to the interplay of indigenous culture, an emphasis on athletic prowess, alcoholism and the problems engendered by a widespread pattern in which grandparents primarily raise children. This cultural ensemble helped to shape the students’ sense of education, creating a younger generation disillusioned with learning English and other academic work (for example, Cheng & Jacob, 2008; Kao, 2009; Lin, 2008; MOE, Taiwan, 2012).

On this personal plane of analysis, certain issues emerge from exploring the interplay between central and peripheral participants’ psychological processes and their cultural, historical and institutional milieux. In the interviews, their personal accounts further our understanding of the meaningful negotiation processes in which these students participated and appropriated cultural resources from their surroundings. Given the richness of the findings, I focus here on Jack’s English learning experience and the gender issues revealed in Vincent’s academic performance in English.

Jack, a peripheral participant in Ms. Lu’s class, was one of the many “athletic dreamers” in Mountainside, who hoped to become future athletes perhaps as a way out of poverty. He demonstrated initial interest in learning English in a curious manner, like Vincent and Vanessa, in primary school. However, in comparison with Vincent and Vanessa’s family resources Jack appeared to be staggering, neither engaged in cram-school learning, a type of private after-school revision institution that is popular among local Taiwanese students for remedial lessons, nor demonstrating everyday English practice at home or community level. The following interview provides a schematic picture as to why he became a peripheral participant.

As shown in Extract 3, Jack had a “very happy” (line 4) time learning English in primary school years but started to dislike it when he got to Year 7 due to more grammar-based learning and failed to “recite” (line 17). When asked if he perceived the importance of learning English, Jack pointed out his dream of “going abroad [...]

to USA” (line 20), yet immediately reflected upon his own constraints and regarded such a dream as impossible. He knew there was a way out of this impasse, saying, “I don’t think I have the chance unless I become a national basketball player” (line 22). Based on his interest in playing basketball and the school cultural system of promoting athletic performances, with various bursaries as encouragement, Jack had been provided with cultural scaffolding, such that he could project himself as being a future national basketball player. It could be argued that, if going abroad was Jack’s ultimate goal, being a sporty athlete was probably the most effective way of realising it rather than changing his peripheral participation trajectory in English learning.

### Extract 3:

1	Interviewer:	Could you briefly describe your English learning experience?
2	Jack:	I started in Year 5 in primary school...
3	Interviewer:	How do you feel about your learning at that time?
4	Jack:	Very happy!
5	Interviewer:	Can you describe what you were learning?
6	Jack:	I cannot remember [...] it was a long time ago.
7	Interviewer:	It’s fine. Did you have any games or interactive activities?
8	Jack:	Yes, we did.
9	Interviewer:	Did you like such learning at that time?
10	Jack:	Yeah. [...]
11	Jack:	I started to dislike it when I got to Year 7.
12	Interviewer:	Why was that?
13	Jack:	[...] because I did not understand... what’s “verb” ( <i>dong-ci</i> )...
14	Interviewer:	You mean grammar and sentence patterns?
15	Jack:	Yes.
16	Interviewer:	Do you have any idea about grammar such as verbs?
17	Jack:	They are more difficult to recite ( <i>bu-hao-ji</i> ) [...]
18	Interviewer:	I can recite it today but will forget about it tomorrow... [...]
19	Interviewer:	Do you know the importance of learning English?
20	Jack:	Yes, ...for going abroad [...] to USA.
21	Interviewer:	So, do you hope to go abroad in the future?
22	Jack:	I don’t think I will unless I become a “national basketball player”!
23	Interviewer:	Do you join the school team at this moment?
24	Jack:	No...but I like playing it.
25	Interviewer:	So, you want to be “Yao-Min” playing NBA, and practise English at 26 the same time [...] as your dream?
27	Jack:	Yeah. ((weak voice))

The different socialisation processes that Vincent, one of the few central participants in his English class, experienced constitute another focal point of the discussion. However, this analysis also considered the different values and asymmetric social expectations associated with gender roles in the Paiwanese community and broader Taiwanese society. Vincent, an only child in a Christian family, was the quietest boy in Ms. Lu’s class. During my classroom observation, I found Vincent to be unusual, not only because of his academic performance but also because of his shyness among his indigenous peers. Unlike the others, known for their athletic prowess, he was not conversational and talked slowly in our interview and field encounters.

Vincent was not especially interested in learning English when he started in Year 3 in a cram school. This cram school was located in a non-indigenous township, thirty minutes away from Mountainside. Vincent's mother faithfully took him to his classes by motorbike, a routine that lasted for five years until he began at Mountainside. Vincent recalled experiencing "a little rejection perhaps", because he was too shy to study with the others, who were strangers. Out of curiosity, however, he gradually became interested in English and wanted to progress. Given Vincent's timidity, his mother's description is useful for fleshing out Vincent's learning trajectory. Vincent's mother commented on his learning experience:

He has the tendency to feel "timid" (bu-hao-yi-si) at anything at the first try [...] indigenous kids are mostly "restless" (hao-dong) and "agile" types. I think his classmates are far more agile than him. But Vincent is working harder than any of his peers.

In comparison to his indigenous peers, Vincent appeared to have benefitted from his mother's involvement in his English learning. Most members of the Paiwanese community have little access to English in daily life (Lin, 2008), which means that Vincent had scarce opportunities to practise English at home or in the community. Nevertheless, Vincent could watch English TV programs and read English storybooks or magazines at home, although sometimes his mother did feel like sending him out to play sports like other indigenous boys. However, the expectation of playing sports like other boys can mean different things in different social contexts.

As Ivinson and Murphy (2007) argue, English language learning has traditionally been regarded as female territory, and girls are encouraged in this area more than boys are. It seems that Vincent crossed into the alien female territory of English language learning. However, his boundary crossing must be interpreted within the broader "soft-hard" distinction between subjects in Taiwanese society rather than in the context of a specifically feminine association with English, as is the case in Ivinson and Murphy's (2007) research on school-boys' outsider identities in learning English language.

### *The synthesis of different planes of analysis*

The common sense belief that "men work outside and women work at home" in Taiwanese society is evident in our findings on parental encouragement for students' English learning. The masculine role embedded in Taiwanese society is epitomised by the following Chinese idioms, which traditionally place females in subordinate roles in everyday activities (see Table 3).

Chinese idioms	Literal meanings	Types
" <i>lang-cai nu-mao</i> "	Intellectual husband and beautiful wife.	Marriage
" <i>fu-cheng fu-sui</i> "	Husbands sing whilst wives follow.	Family
" <i>nan-geng nu-zhi</i> "	Men farming whilst women weaving.	Career
" <i>nu-zi-wu-cai-bian-shi-de</i> "	It is virtue of women to be non-intellectual.	Education

**Table 3. Gender imbalance in Chinese idioms**

The common thread running through these idioms is an asymmetry in gender roles – "men superior, women inferior" – across various circumstances in everyday family life, career choices and education. These traditionally gendered idioms, as cultural

legacies, reinforce masculinity and perpetuate its influence. Social expectations of gendered roles also influence individuals' experiences, choices and achievement within institutional settings (Ivinson & Murphy, 2007). The generic norm "*nu-wen nan-li*" (girls: social sciences, boys: natural sciences) echoes the common sense belief that girls should study soft subjects and that boys should study hard subjects. These cultural beliefs lead girls, encouraged by their parents and school teachers, to choose subjects such as English language, history and geography when they select their specialisation in the second year (Year 11) of senior high school in Taiwan.

At a deeper level of local meanings associated with Taiwanese learning culture, soft subjects are seen as demanding rote learning, long-term concentration and dedication to high achievement. These traits, in turn, are regarded as female territory. Boys, in contrast, are expected to study hard subjects that enjoy a high status in society, and the activities related to them are valued as practical and beneficial for their successful future careers. Most boys, therefore, are encouraged to be, for example, outgoing and to strive for scientific achievements or physical fitness. The values attached to English language learning deserve further investigation, especially with respect to underachieving boys, who seem to make considerable effort to manage their precarious positions by negotiating crossings into "alien gender territory" (Ivinson & Murphy, 2007).

In Vincent's case, a dominant ethnic culture that values athletic prowess for boys must be addressed to understand his social gender identity in the process of learning English. When he stayed indoors reading, avoiding the male territory of outdoor sports, what was at stake was the balance between a membership identity with his male peers and his subjective interest in learning English. Jack, Vincent's classmate, described Vincent as "the only boy who can sit at the table reading for three hours at home". Jack attributed Vincent's good academic work to this ability to read for long hours, which was an alien activity to boys like him. Arguably, Vincent's parents made his central participation possible, although this process involved a struggle. His mother's account reveals her concern about Vincent not being athletic, even though it benefitted his schoolwork:

I used to wonder why Vincent does not like sports [...] we try to encourage him to be "outstanding" in schoolwork. [...] But sometimes we still encourage him to take a walk after staying home for the whole day reading [...] I will send him "out the door" (*gan-chu-men*) for some exercise [...] Indigenous kids are usually "restless" (*hao-dong*) and "agile" (*min-jia*).

It could be argued that Vincent's mother experienced, implicitly or explicitly, tension due to the masculine/feminine asymmetry in indigenous culture, even though she valued academic study. Vincent's crossing into alien female territory by staying home for long hours reading or watching TV seemed to violate the expectation that men should be athletic in Paiwanese culture. That he was unusual in doing so attests to the possibility that gender identity may help to explain why more boys than girls become peripheral participants in English learning communities, such as those at Mountainside.

## CONCLUSION

Cognitive-oriented theories of SLA or EFL research have employed experimental research approaches that tend to disregard social, cultural and historical contexts. The emerging Vygotsky-inspired socio-cultural approaches, which offer different methodological choices from those of conventional English language studies, have challenged the mind/society dualism and brought culture back to the centre of inquiry. In this paper, I have reviewed the theoretical debate over methodology by examining the ontological, epistemological and methodological controversies around cognitive-oriented theories. To offer an example to support my theoretical and methodological arguments, I have presented a socio-cultural study on EFL teaching and learning in a Taiwanese indigenous school, aiming to explore students' different experiences in learning English and the interweaving of relationships between ethnic culture and English language learning in schools, at home and in the community.

The findings of this study, drawing from its methodological framing, indicate, first, that the community plane of analysis and the interpersonal plane of teacher-student interactions in classroom settings provide us with a broader picture of the resources that are available to help students access English. Second, at the personal level, individual students' active social positioning was found to involve membership identities within English learning communities, which were shaped by social and cultural contexts that could affect English learning. These findings suggest that non-experimental modes of inquiry that employ a complex research design with multiple methods and tools for multi-layered analysis are productive and appropriate. Socio-cultural theoretical lenses and their methodological framing, therefore, help us to move away from individualistic modes of inquiry by broadening the focus to view English language learning as a situated practice influenced by social and cultural forces, including family, institutional and personal settings and values.

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