

Enhancing indigenous Taiwanese children's cultural knowledge and cultural attitudes in English by Culturally Responsive Pedagogy

Jean Chiu

English Department, Wenzao Ursuline University of Languages, Kaohsiung, Taiwan

This paper features a pilot study of the impact of Culturally Responsive Pedagogy (CRP) on 24 mixed-aged primary school students of the Bunyan indigenous community in Taiwan during a non-school setting of a five-day English camp. The curriculum included four themes of English festivals and Spanish culture as Multicultural Education (ME) instructional interventions. The study used quantitative methodology with Pre-test and Post-test surveys with open-ended feedback on cultural attitudes and cultural learning. The results showed significantly increased self-confidence and cultural knowledge after initial difficulties. Open-ended feedback indicated highly positive perceptions of festivals and attitudes to CRP in ME language learning. CRP implementation, however, required transitional adjustments in a guided approach of Chinese-English comprehension assistance prior to English activities. Future research is thus recommended into integrating culturally relevant tribal culture, to help indigenous children acquire optimal English learning attitudes and cultural learning effectiveness.

Keywords: Culturally Responsive Pedagogy; Multicultural Education; indigenous children's language learning; cultural attitudes; cultural knowledge; Taiwan

Introduction

Taiwan's indigenous community has preserved 16 officially recognized Austronesian tribes constituting approximately 2% of the entire population of Taiwan (Council of Indigenous Peoples Taiwan, 2015). Relevant literature has reported local indigenous students' needs in regard to responding culturally to the gap in their academic performance compared with that of the remainder of the population, and their low motivation for learning and especially their low motivation, confidence and attitude in respect to English learning (C. H. Au, 2005; Chen, 2008; Ho, 2005; Liu, 2012).

Cultural knowledge and cultural attitudes have become important in developing global competitiveness (Banks & Banks, 2010; Nieto & Bode, 2008). One effective approach to this challenge is Culturally Responsive Pedagogy (CRP) (Gay, 2000; Ladson-Billings, 1992; Smoot, 2007). It has been found effective in U.S. models for African-American and Hispanic learners in mathematics, and science in primarily urban diverse settings (Gaitan, 2006; Milner, 2011; Sleeter & Cornbleth, 2011). However, it has been less researched in an English as a Foreign Language (EFL) context which is focused on indigenous child learners' cultural knowledge and cultural attitudes.

In the current study, CRP is defined (Gay, 2000; Ladson-Billings, 1992) as a cultural pedagogy which features: emphatic understanding of minority learners' diverse cultural, ethnic, linguistic and social backgrounds; strategic adjustment to fit learners' deeper needs; and curriculum design modification in culturally relevant content, distinct from the mainstream curriculum. Cultural knowledge (Liu, 2012; Nieto & Bode, 2008)

of English refers to a person's information repertoire of culture related to English-speaking countries and the global culture. Cultural attitudes to English, in contrast, refers to a person's interest, motivation, and confidence in learning and using English (Banks & Banks, 2010).

The purpose of the study reported here was to pilot and explore the impact of Culturally Responsive Pedagogy cultural knowledge and cultural attitudes to English in children of one small indigenous tribe (the Bunun). The researcher set out to empower culturally disadvantaged Bunun learners, and to bridge academic and cultural gaps (Nieto & Bode, 2008).

This study took place within a small indigenous tribal community Bunun village, located on a remote coastal mountain site. It is particularly significant that there is no English-Chinese bilingual kindergarten or English supplementary school in this township, as there are in most cities in Taiwan. Situational and financial concerns had left selected students disadvantaged through the lack of supplementary academic enhancement, including English. Yet cultural competence, cultural knowledge and attitudes are important to their village tourism and job competence.

The research questions in this study are:

1. How effectively does Culturally Responsive Pedagogy develop indigenous Bunun children's cultural knowledge of English?
2. How effectively does Culturally Responsive Pedagogy foster indigenous Bunun children's cultural attitudes to English?

Literature Review

Culturally Responsive Pedagogy

Theoretically, Culturally Responsive Pedagogy (CRP) aims to bridge cultures by in-depth understanding of minority learners' diverse backgrounds; strategical adjustment for their needs; and curriculum design modification. Within the broader context of Multicultural Education (ME), CRP is only one of the approaches that have been adopted to accommodate the needs of culturally diverse and minority learners' needs in education. Gay (2000) advocates that ethnic minority's learning patterns and academic performances should not be perceived as deviating from "standard" socio-cultural norms. Liu (2012) points out the hegemony of mainstream teachers' prejudice in attempting to correct minority weaknesses with a politically incorrect perspective. For CRP, teachers should not view their culturally diverse students as low achievers and in need of supplementary educational correction.

Gay (2000) suggests that the following qualities are needed by teachers to help conceptualize CRP in practice:

- Commitment to the education of culturally diverse learners' education, and caring for these learners,
- Competence with sufficient knowledge to modify teaching approaches appropriately,
- Being ready to adjust psychologically to the teachers' new non-dominant role, and modify the curriculum according to CRP.

Effective implementation of CRP (K. Au & Jordan, 1981; Ho, 2005; Ladson-Billings, 1992), requires teachers' keen observation, and the cultural sensitivity to understand the minority learners' home cultural context, including their language uses, seeking culturally appropriate ways to link CRP educational belief with classroom actions, diversifying teaching approaches and philosophy in daily teaching beyond

superficial cultural learning, capability to accommodate individuals' special needs and provide a suitable learning environment, collaborative teaching and learning with parents and community for management, and use of appropriate sources to elevate learners' self-esteem.

In applying CRP to provide culturally diverse kindergarten and primary school contexts, Gaitan (2006) found its success related to teachers' cultural competence, especially in holistically understanding minority learners' family values and practices, with respect for their different cultural backgrounds and with high expectations even when problematic behaviours persist and academic achievements are low. The students need to understand that what they had and where they came from is of value; thus they are encouraged to use their home language for thinking and problem-solving. For example, a Mexican second grader who missed her school and books which were written in Spanish, needed CRP support for the cultural and language adjustment to allow more time and companionship for her to transit from her home culture (Gay, 2000).

The CRP strategies can cover a variety of methods, approaches and activities (Gaitan, 2006; Sleeter & Cornbleth, 2011). In Gaitan's (2006) research, a CRP maths teacher encouraged self-reliance in following the critical inquiry method and cultural integration. In this way, learners of different ethnic backgrounds could approach maths problems in their own ways with their own explanations, so that maths, language and culture could be experienced collaboratively. The CRP curriculum included group projects entailing contacting diverse cultural groups and keeping a notebook about their feelings, notions and thoughts to share with the class. Another approach could involve creating family trees and describing lessons learned from a senior member of the learners' families. Gaitan (2006) also urges rethinking of school policies that govern classroom cultural learning, and the formal textbook curriculum. In view of this, the current study set out to experiment with an alternative cultural curriculum, so that different languages and cultures could be experienced collaboratively for primary school children's EFL learning.

Milner (2011) investigated a European American teacher's CRP development in a science class within a highly diverse urban school. He used CRP first to effectively build relationships with his students, and then to increase his cultural knowledge about how identity and race manifested in urban learners' schooling experience. His way of implementing CRP was to adopt a communal and collective approach, so that culturally diverse students' learning opportunities could be maximized through collaboration. While Milner believed in the importance of establishing cultural congruence with culturally diverse learners, Howard (2003) calls for critical teacher reflection on the CRP teacher's role so that learners would not be perceived in a biased way as culturally, socially and linguistically diverse. Self-critical teachers can facilitate culturally diverse learners to be critically aware of their cultural identity and future. The current researcher hence aspired to connect in her pilot study with low placement learners, in such a way that they would not perceive themselves as low-achievers, and give up on themselves and on English acquisition.

In a standards- and test-driven teaching environment, Sleeter and Cornbleth (2011) researched the challenges encountered by CRP teachers displaying social and pedagogical vision, in California and New York. They encouraged teachers to maintain a supporting network, even in less supportive environments without parental cooperation. Sleeter and Cornbleth (2011) call for re-examining the struggle between grassroots CRP and a top-down, teach-by-the-numbers approach; integrating maths, history units, and language curriculum grounded in culturally diverse students. They

advocate inclusion of students' first-hand-experience and connecting with the world beyond the classroom. The current researcher considered linking her students' culture with the world by historical storytelling and making cultural connections with English and other cultures.

Learning characteristics of Taiwanese indigenous tribes

Taiwanese indigenous learners have the following culturally-related disadvantages in the mainstream education systems and concepts (C. H. Au, 2005; Chen, 2008; Liu, 2012):

- Reversed language structure: the sentence structure of the indigenous languages is different from English and Mandarin Chinese. Instead of a Subject-Verb-Object (SVO) order, the Verb comes first and is supplemented by either a Subject or Object. This difference may cause problems for indigenous learners. However, the participants of the current study were fluent in both Bunun and Mandarin Chinese. Their knowledge of the SVO structure of the latter may have lessened the impact of reversed language structure on learning English.
- Different concepts of time, space, and mathematics: tribal life does not abide by strict time schedules, but by following the tempo of nature. Also, the indigenous peoples are talented in spatial management, so that complex embroidery, for instance, does not need a specific blueprint design in advance.
- Learning by doing instead of learning from verbal input: indigenous tribes learn their life skills by observing, doing, practicing with instructive errors and mentoring. This hands-on learning system is quite dissimilar to learning from verbal concepts, as in the mainstream system.
- High-contextualized culture: indigenous people's highly close social networks are communal in their co-living patterns, their habit of sharing, and their harmony with nature and others. Thus mainstream education may appear different from their socially constructive community.
- Different life experience: living in nature and amidst mountains may create a different life experience in perceiving the world, knowledge, and nature. This knowing of the world is different from the scientific learning in the mainstream construction of knowledge.

Taking into account the above, the CRP strategies in indigenous children's English classrooms may profitably integrate indigenous learners' strengths in kinaesthetic (bodily intelligence), musical (singing intelligence), interpersonal (close communal system), and natural (outdoor preference) intelligences, as in maximizing Gardner's (2000) Multiple Intelligences for effective CRP.

The Study

Research method

The study utilised a pre-test and post-test surveys coupled with open-ended feedback as the methods of data collection to identify and compare knowledge of language and cultural attitudes (Allen, 2002). To help develop cultural attitudes and multicultural knowledge beyond the subject matter of traditional English classrooms (Sleeter & Cornbleth, 2011), the study planned to include focuses on Thanksgiving, Christmas, Easter, St. Patrick's Day, along with culturally-relevant communal Spanish culture and

the familiar Japanese and Asian cultures (partially reflecting the values rooted during the Japanese colonial era in Taiwan).

Research participants and context

The teacher participants included the researcher, and four university English major volunteer student-teachers. The student participants included 24 Bunun indigenous primary school children with the following characteristics:

- Gender: 12 girls, and 12 boys
- Ages: ideally student participants would have been 11-12 year-olds at the crucial stage of promoting to exam-oriented junior high schools. But, of necessity, participants ranged from 6-13 years old, due to the communal family structure in which older siblings care for younger ones. The result was a group of nine 11-13 year-olds, seven 9-11 year-olds, five 7-9 year-olds, and three 6 year-olds.
- Cultural backgrounds: most had a high cultural identity in Bunun indigenous status (except for two who revealed in the pre-test they would rather have been born as mainstream Taiwanese Han people)
- Language background: all were fluent bilingual speakers of Mandarin and Bunun, with names in both languages (since Mandarin is the common language used in schools, while Bunun is used as language of family intimacy, often with grandparents, but not with outsiders). Participants conversed with teachers in fluent Mandarin throughout the programme.
- Level of English (in relation to their school grades): primarily low in reading, speaking and listening.
- The site: Bunun Village, a non-governmental Christian organization in Luyeh Township, Taitung County, Taiwan, which was created by Pastor S. K. Bai and is officially entitled Bunun Educational and Cultural Foundation. It is all-inclusive tourist centre presenting two indigenous dance performances daily.

Research assessment tool

The study used a two-category 17-item survey to help assess the impact of CRP teaching. It was aligned with the key variables identified by Nieto and Bode (2008), Liu (2012) and Banks and Banks (2010). In the first category, six items covered participants' cultural attitudes including interest, motivation, liking of English and English songs, their cultural identity, and their confidence in English conversation. The second category covered four English-language cultural festivals (with two items for each of: Thanksgiving, Christmas, Easter, and St. Patrick's Day) and Spanish and Japanese cultures (one item for each). There was a final item on overall understanding of some western festivals and an open-ended section with two questions about what participants liked the most, and what message they would like to share with the teachers of the English cultural camp.

All items were written in standard Chinese characters and the Taiwanese version of a phonetic system for young children's comprehension.

Research design

The instructional interventions comprised of a theme-based curriculum with a CRP approach which is considered more fully below.

Curriculum design

Theme-based language teaching for cultural purpose (Howard, 2003; Yang, 2009) was used in this programme for its effectiveness with young learners in holistically integrating vocabulary, diverse skills, and activities in a given theme. It suited the indigenous learners' interest in the foreign cultural context, which had been evidenced in an informal survey a year earlier. The indigenous learners preferred to learn about cultural festivals in English, rather than to learn from the standardized English-language textbook used in Taiwan. The choice of themes for English-language festivals was due to their well-known roles in the U.S. and U.K. cultures and the rich resources available to present cultural practices dramatically to an audience of children. Learning about English-language festivals lasted approximately 3 hours in each morning session (see Table 1 for an example). Afternoon sessions focused on Multicultural Education, with Spanish and Japanese cultures each featured on 2 days (see Table 2 for an example).

Table 1. Day 1 morning schedule (Theme = Thanksgiving)

Time	Activity
10 minutes	song starters
50 minutes	cultural knowledge -origin of this cultural festival (the first Thanksgiving) -cultural implications (Thankfulness to God and native Indians' generosity) -symbolic food/plant or cultural practices (turkey, corn, pumpkin...)
50 minutes	English language and expressions: vocabulary and hands-on writing activities with Chinese-English translation assistance ("Happy Thanksgiving! Dear Mother, thank you for cooking and taking care of us!")
40 minutes	songs and games (vocabulary review by speaking, or spelling)

Table 2. Afternoon schedule (Target language = Spanish)

Time	Activity
40 minutes	Second Foreign Language: -Simple Spanish greetings, numbers 1 to 5, farewell, name -Spanish singing/ dances
40 minutes	Cultural Knowledge of country with this Second Foreign Language: -Where is Spain? National flag? -Spanish culture of passion, familyhood, slow tempo -Well-known Spanish cuisine: paella (Spanish seafood rice) and arroz con leche (Spanish rice pudding) -Spanish festivals: cultural practices in festivals of San Fermin (bull fight festival) and La Tomatalia (tomato festival)
40 minutes	Outdoor group activities to review English and Second Foreign language lessons of the day

Design of pedagogy (CRP strategies)

For effective language and culture learning, the programme used CRP as the teaching approach in the following ways:

- Embodying indigenous strengths in kinaesthetic activity (body movement, dancing & hands-on tasks of cards-making and eggs)
- Musical (singing in English or a second foreign language)
- Interpersonal (changing pairings or groupings in the communal system)
- Natural intelligences (outdoor activities, hide-and-seek, running)
- Being affective, caring, and supportive of learners' learning needs (Gay, 2000) and their whole-person-development, with cultural sensitivity to understand their family context
- Public performance in English to develop self-confidence and talents

Results

This section presents a view of participants' cultural knowledge and cultural attitudes, prior to and after the instructional interventions. It is based on the Likert scale survey responses and is supplemented by their own "voices" as expressed in open-ended feedback cards.

Cultural knowledge

The overall cultural experience was effective for cultural knowledge learning, as evidenced by participants' pre-test and post-test scores (Table 3) supplemented with knowledge gains shown by the t-test (Table 4). Their cultural knowledge of western festivals (item 11) improved significantly ($M=1.50$ to 3.00 , $p<.00$). Their knowledge of all four English-language festivals as well as of Spanish and Japanese festivals, also increased. Despite having Christian church experience, they did not initially answer correctly about the origin of Easter and western practice (Table 4), yet after the programme, they had gained cultural knowledge ($p=.00$). All t-test results indicated significant improvement except the Japanese July 7th, which implied a slightly different festival in the lunar calendar in a Taiwanese context.

Participants' open-ended feedback further confirmed that they had developed positive cross-cultural knowledge and attitudes in the midst of initial difficulties and disciplinary issues. The majority of the learners loved to sing English songs and to learn about English and Spanish festivals. Some children of low comprehension level and of older age, who had initially made noises to disturb others' learning, particularly liked Spanish and its dance. Later in the week, one of them turned out to be highly motivated:

Participant 2 (12-years old): I am not afraid of English any more. I like to learn English now. It is good to learn Thanksgiving, Christmas, with Spanish festivals. It is cool to sing and dance in English in front of every guest. XX (he can spell his English name).

To sum up, Multicultural Education in CRP was successful for these indigenous children's confidence and cultural knowledge, because it triggered their indigenous learners' desire to use English and learn other cultures for the cross-cultural knowledge and the languages they represented.

Table 3. Participants' level of cultural knowledge

Cultural knowledge items (N=24)	Pre-test		Post-test	
	Mean	SD	Mean	SD
1. British people took the Mayflower ship to U.S.	3.00	1.02	3.83	0.63
2. People do not eat turkey at Thanksgiving.	1.88	1.26	1.13	0.61
3. Christmas is the birthday of Santa Claus.	2.04	1.36	1.25	0.84
4. Christmas is in winter for every country.	3.00	1.28	1.13	0.61
5. Easter is the time of Jesus' birth.	3.21	1.25	1.75	1.32
6. People hide and seek coloured eggs in Easter.	2.21	1.38	3.63	1.01
7. The colour for St. Patrick's Day is orange.	1.96	1.04	1.25	0.85
8. The plant for St. Patrick's Day is the shamrock.	3.25	1.39	3.75	0.85
9. Paella is a Spanish pudding.	2.21	1.35	1.63	1.24
10. The 7th July is the Japanese Valentine's Day.	1.63	1.13	1.88	1.39
11. I understand some western festivals.	1.50	0.93	3.00	0.93

Table 4. Indigenous children's t-test results on cultural knowledge

Cultural Knowledge Items (N=24)	T	p value
Thanksgiving 1-Mayflower ship	-3.29	0.00
Thanksgiving 2- turkey	2.48	0.02
Christmas 1 Santa Claus birthday	2.68	0.01
Christmas 2 around the world	6.45	0.00
Easter 1 birthday of Jesus	3.73	0.00
Easter 2 coloured eggs	-4.91	0.00
St. Patrick's Day 1 colour	2.60	0.01
St. Patrick's Day 2 plant	-4.04	0.00
Spanish Paella	1.98	0.04
The Japanese 7th July	-0.60	0.55
I understand some western festivals	.66	0.00

Cultural attitudes

The Bunun child participants had low cultural attitudes, confidence and abilities in English overall, at the outset of the program (Table 5). They lacked self-confidence in English ($M=2.04$) and had moderate motivation in English classes ($M=2.96$). When the programme began, four of the nine 5-6 graders were still unable to identify A-Z, and write out their English names in English. The majority thought it was difficult to speak English ($M=3.04$) and this was borne out by difficulties in reading aloud English words and phrases. They also had difficulty in accurately copying letters in the English alphabet (for example, they copied turkey as turkej or turkeg). Despite their natural talent to sing, they were quiet in singing because of their low confidence to sing in English ($M=2.00$), which was contrary to general impressions of their musical talent.

Table 5. Indigenous learners' cultural attitudes

Cultural attitude items (N=24)	Pre-test		Post-test	
	Mean	SD	Mean	SD
12. I like English classes.	2.96	1.12	3.13	0.99
13. I think my English is good.	2.04	1.23	3.33	0.82
14. I like to greet foreigners here in our cultural village.	1.46	0.93	2.75	0.90
15. I sing English songs well.	2.00	1.22	3.33	0.92
16. I think it is difficult to speak English.	3.04	1.04	2.21	1.10
17. I am proud to be a Bunun.	3.04	1.26	3.00	1.18

In the post-test of cultural attitudes (Table 6), the child participants remained consistent in declaring their high cultural identity of being Bunun. However, they also significantly increased in their reported self-confidence in English ($M=3.33$, $p<.05$) and their motivation in English classes ($M=3.13$, $p<.05$). Their view of their ability to sing in English also improved considerably ($M=3.33$, $p<.05$) which was probably due to an instructional intervention involving singing English songs to an international audience. In addition, the standard deviations of their cultural attitudes had largely been reduced since the pre-test, indicating more convergent viewpoints about English. Based on the post-test, participants were more open to greeting foreign guests in the cultural village ($M=2.75$, $p<.00$) with “Hello! Hola!” “How are you?” and “Welcome to Taitung”. Senior male participants 4, 7, and 9 particularly changed to greet, speak out loud and sing out loud in English. Eleven participants wrote about their increased confidence in English in the open-ended feedback, for example:

Participant 1 (11-years old, writing in English): Dear Xx, Thank you for teaching me English. My English was bad. I did not like English. Now I love to learn English! Come to Taitung again! xx (he could spell his English name)

Participant 3 (9-years old, with discipline problems, writing in English): I did not like English, but I like English now! I love to sing the Disney Frozen song.

Table 6. Indigenous children's t-tests in cultural attitudes

Cultural Items (N=24)	T	p value
I like English classes.	-0.72	0.47
I think my English is good.	-4.42	0.00
I like to greet foreigners here in our cultural village.	-5.28	0.00
I sing English songs well.	-4.46	0.00
I think it is difficult to speak English.	2.50	0.02
I am proud to be a Bunun.	0.16	0.87

To sum up, there was significant change in the cultural attitudes of the child participants. By the end of the programme their responses to all cultural attitude items had increased while their cultural identity had remained strongly associated with their Bunan tribe (Table 7).

Table 7. Summary of changes from pre-test to post-test

Survey items	Pre-test	Post-test
Motivation for learning English	generally low	higher
Confidence in speaking English	low	higher
Interest in greeting foreign visitors	low	higher
Motivation in singing English songs	low	higher
Cultural identity with Bunun tribe	high	high

Discussion

The results of this study show that Culturally Responsive Pedagogy is effective in fostering indigenous elementary school learners' cultural attitudes and confidence in the target language. As Gay (2000) suggests, an affective and culturally sensitive approach helps develop cultural attitudes. It enhanced the minority children's confidence, self-esteem and learning motivation in English, from slightly disagreeing to moderately agreeing. The approach of teaching Spanish and English together helped overcome their original fear of English and antagonistic attitude towards "foreign" subjects. Those indigenous children with low academic placement lacked confidence in English and found English quite difficult initially. However, the integration of Spanish language and culture in the programme was affectively effective, in motivating their cross-cultural attitudes to learning another foreign language, without feeling comparative inferiority. The effectiveness of the CRP integration of Spanish and English was evidenced by their open-ended feedback regarding their comfort level in simple English conversations and Spanish songs.

Moreover, the experience resonates with the findings of Nieto and Bode (2008) confirming that empowerment is achievable through increasing indigenous learners' cultural knowledge. The majority of the cultural knowledge items and the final understanding of western festivals were significantly improved. Despite the church background, the indigenous participants in this study had not been highly familiar with western festivals' origin and practices, particularly Easter, which was initially mistaken by most as remembrance of Jesus' first birthday instead of his resurrection. Therefore, cross-cultural knowledge enhancement was still necessary although they somewhat understood Christmas, which was as important to them as their traditional Bunun Harvest Festival. Insufficient cultural knowledge featuring as a cognitive gap could also contribute to their initial lack of confidence to speak English and their negative attitude towards English. Cultural knowledge enhancement is interwoven with enhanced cultural attitudes, by empowering learners as cross-cultural communicators and singers, as Nieto and Bode (2008) advocate. This cross-cultural learning experience empowered them as human beings and fulfilled them as talented singers to sound out their voices and receive public recognition, which in turn reinforced their cultural attitudes.

As Gay (2000) pointed out, transitional adjustments to the pedagogy may, however, be required in CRP, to provide the needed bridging in curriculum and strategies. Singing in English is presumably an effective activity although not immediately and directly. It proved difficult to directly teach the participants Christmas songs in English, or to persuade them to sing in English initially ($M=2.00$) partially due to lack of English exposure in authentic contexts or social media. In the church-going culture, CRP required strategy changes to first have them sing a spiritual song in Chinese for familiarity in singing, before singing English songs for enhancement of comprehension. The participants in this pilot study were less ready to adapt to the Direct Approach calling on them to sing aloud directly with YouTube English songs, without having first had the guided approach of an oral word-by-word English-Chinese explanation. Their reluctance was partially related to their English literacy and comprehension levels, as they were not able to follow the English lyrics as their mainstream counterparts could have done. Due to their musical and kinaesthetic talents (Chen, 2008), once their fear of English was overcome, their confidence increased in reading and singing in English.

Contrary to the recommendations by Chen (2008), not all indigenous characteristics in the literature review were found to be influential to English learning, particularly the SVO language structure. The English SVO structure was not found problematic in the students' writing process, as most were also fluent in Mandarin, a SVO-structured language. Meanwhile, similar to the findings of Chen (2008) and Liu (2012), indigenous rural participants tend to be more kinaesthetic, musical, interpersonal and natural than their urban mainstream Taiwanese counterparts. With comprehensible cognitive input, Culturally Responsive Pedagogy was found effective by involving the following intelligences and strategies with indigenous child learners:

- Kinaesthetic: dancing with singing and hands-on tasks like cards-making for different themes and contexts
- Musical: singing first in Mandarin, then in English or another foreign language publicly, also for public recognition and self-confidence
- Interpersonal skills: pairing up stronger children with weaker ones as a safety network, changing team members to help concentrate/ behave in a supportive system provided by elder brothers or sisters
- Natural intelligences: outdoor activities, running to match, hide and seek, swimming as the end-of-the-day bonus to help overcome weakness in text-based verbal (vocabulary and phrases) learning

Thus the capability to accommodate the special needs and learning styles of rurally located and hence disadvantaged indigenous learners was found crucial to encouraging those with low self-esteem. Management also proved slightly challenging because of the participants' highly active style; thus collaboration with local adults or local English teachers in the community will be helpful in dealing with cases of indiscipline and class management.

Conclusion

CRP was effective in affecting cultural knowledge and cultural attitudes in an indigenous and rural ME context. Indigenous elementary school learners overcame anxiety of English communication, and increased their confidence and English motivation. With culturally bridging methods of first singing familiar Chinese songs followed by Chinese explanations, indigenous learners became confident in singing other English songs publicly; they also developed their cross-cultural knowledge and willingness to communicate. CRP cared for learners' whole person life experience (Gay, 2000) and adjusted to indigenous ways (like making colourful traditional beads and card-making) in a culturally bridging environment.

Limitations of the study

Due to the limited duration and the small mixed-age sample size of participants located in an indigenous village on a mountain, the research results cannot be generalized to the entire indigenous primary student population of diverse backgrounds. The culturally relevant themes were limited to English-language culture located in the English teaching and learning process, and thus may not optimize the impact of indigenous cultural identity. However as a pilot, the study has established a *prima facie* case to explore effectively facilitative and supportive relationships with such educational goals in mind.

Recommendations for further research

In view of the needs for self-confidence in verbal expressions and sustained English language and cultural learning, the research identifies the case for long-term language development, with affective and management help from local indigenous English co-teachers. Future research is thus recommended to extend the duration of cultural learning and the integration of themes based on tribal culture, to maximize culturally responsive English learning attitudes and cultural learning effectiveness.

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About the author

Jean Chiu is an associate professor in the English Department at Wenzao Ursuline University of Languages, Taiwan. She is interested in cross-cultural interactions, critical thinking development, and holistic approach to language education.

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