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Poststructural feminist pedagogy in English instruction of vocational-and-technical education

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Abstract The purpose of this study was to develop a poststructural feminist pedagogical model and to investigate whether vocational-and-technical college students receiving poststructural feminist instruction would exhibit better learning achievement and critical thinking ability, and express greater satisfaction with their classes than those receiving traditional instruction. In applying a poststructural feminist model, the researchers intended to help both the teacher and students work together to overcome the estrangement and alienation that have long been the norm in the contemporary Chinese education system. The research results show that the poststructural feminist pedagogy had a positive effect upon the participants in the experimental group. Several conclusions are elicited from the study. First, in the English language achievement post-test, the participants receiving the poststructural feminist instruction significantly outperformed those receiving the traditional banking instruction in terms of listening, vocabulary, grammar, and reading. Second, in the critical thinking ability post-test, the participants significantly outperformed those receiving the traditional banking instruction in terms of length, focus, content, organization, and style. Third, in regard to the students' satisfaction, it was clearly shown that the students who received the instruction informed by poststructural feminist pedagogy expressed significantly greater satisfaction than those who had received traditional banking instruction in terms of instructional objective, teaching method/materials, teacher quality, class environment, and assessment.

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Introduction

The vocational-and-technical education (VTE) system has played an important role in educating students to become professionals and in contributing to Taiwan's economic and industrial development. However, because both the Taiwanese entrance examinations and Chinese culture in general have placed great emphasis on learning achievement, students with better learning achievement would not choose the VTE system but rather the general education (GE) system to continue their higher education (Su 2005). Most of the students entering the VTE system are those with lower academic achievement, including English performance (Chen 1986; Huang 2004; Su 1997). For instance, in Huang's research (1999, 2001) investigating the vocabulary size of GE college freshmen and that of VTE college freshmen, it was found that GE college students had acquired approximately 1,950 high-frequency words, while VTE college students could identify only 1,690 high-frequency words. In another study of Huang's (2004), it was found that GE senior high students could identify approximately 1,969 words, achieving the 1,000-word level and almost reaching the 2,000 word level, but VTE senior high students could identify only 426 words on average, failing even to reach the 1,000 word level. This finding indicates that GE senior high students' vocabulary was approximately 1,500 words greater than that of VTE senior high students. Meanwhile, the different means of vocabulary knowledge between VTE students and GE students are statistically significant.

Not only is the VTE students prior knowledge not as good as the GE students; after entering the VTE system they have less chance to learn and practice English due to the lower amount of instructional time and quality and quantity of teaching materials, factors responsible for VTE students' lower English proficiency (Chen 1986; Huang 2004; Su 1997). For instance, VTE students have only 2 h of English instruction per week, while GE students have at least 4 h including English conversation and English composition courses, which are seldom provided to VTE students (Huang 2004).

It is known that in Taiwan, the VTE system is career-oriented, with the goal of training professionals to meet the demands of national economic growth, industrial changes, and technological advancement (Taiwan Ministry of Education 2004). Having focused more upon professional knowledge and specialized skills, most VTE students tend to regard English courses as a low priority. In Wu's study (2001), the only motivation for VTE students to attend required English courses was simply a desire not to be failed in these courses. Under the misunderstanding that the English courses will contribute little to their academic goals and career goals, VTE students do not want to expend much effort on these courses.

Furthermore, having realized that their learning achievement is not great, VTE students have low confidence and poor motivation to learn (Su 2005). Also, thinking that they are inferior to GE students, many of them even suffer from low self-esteem. Besides this, due to the difficulties experienced in their English learning process, VTE students lack motivation in learning English (Wang 2002). Up to two-thirds of them experienced pain and frustration in learning English. To make it worse, many lose their interest in English or even give up learning it altogether.

Given that many VTE students lack motivation to learn English, the study intends to develop a poststructural feminist pedagogical model and investigate whether this model has the potential to positively affect English class instruction in the VTE system, in terms of the English learning achievement, critical thinking ability, and student satisfaction.

Literature review

Teaching methods in the Asian classroom are always authoritarian and expository in which teachers are in complete control of the class instruction while transmitting knowledge to students, who can only listen quietly and submissively (Biggs and Tang 1996). Having been influenced by traditional Confucian patriarchal philosophy, it is said that students talking back in class would be interpreted as an insult to their elders (Hong et al. 2005). Therefore, afraid of being labeled as offensive or ignorant, students in Taiwan would rather keep silent than speak up in class. In other words, the authoritarian Chinese classroom favors students as passive learners, and the knowledge transmission is one-way, from professor-to-student.

Drawing on poststructural experimental learning theory, Kayes and Kayes (2003) conceptualized management development as a series of concurrent reflective conversations. It is suggested that management development is not a direct reflection of individual self but rather a process of looking at individual differences. Hence, it is necessary to incorporate issues of diversity when planning curricula—including differences in race, gender, class, culture, family background, etc.—in order to transform education to suit a diverse society (Goonewardena et al. 2004), Therefore curricula planners must open their minds to embrace differences and develop critical analytical skills to understand, empathize, and further work with diverse communities. A poststructural feminist classroom is intended to change the negative effects of power imbalances in the hierarchical class structure. Traditionally, teachers have been regarded as the sole authority in terms of their professional knowledge and expertise, and a hierarchical relationship arises between teachers and their students (Hooks 1994). However, in the poststructural feminist English classroom in which dialogical interactions are promoted and knowledge is viewed as socially constructed and culturally-bound (Lather 1992; Jackson 1997), by downplaying the authority of the teacher, students can openly share and communicate with the teacher and their classmates and be actively involved in the knowledge construction. Hence there is not a sole authority but multiple authorities, for authority can be developed from a variety of sources, and especially from students' existing knowledge and life experiences (Campbell 2002).

Poststructural feminist pedagogy is intended to not only deconstruct the patriarchal (subject/object, active/passive) education structure defining teachers and students but also to deconstruct the unbalanced (center-margin) structural relationship between mainstream education students and marginalized students. There are some characteristics shared in poststructural feminist pedagogy, as defined by many writers (Bakhtin 1981; Bulter 1990; De Lauretis 1984; English 2005; Foucault 1982; hooks 1989; Maher and Tetreault 1994; Orner 1992; Tisdell 1998, 2000; Weiler 1991). Poststructural feminist pedagogy is also intended to empower students and give them voices, as in a traditional classroom setting students' voices are often silenced or trivialized. Poststructural feminist pedagogy seeks to interrupt the reinforced patriarchal dominance in the classroom, giving power to all students, especially female and marginalized students. Instead of seeking a reversal of the patriarchal power structure, Research has shown that (Tisdell 1998 and 2000; Weiler 1991) poststructural feminist pedagogy seeks to empower, to give voice and influence to those students who have been excluded from traditional power structures. Furthermore, this pedagogy questions the role and authority of teachers (Flax 1990; Horkheimer and Adorno 1990; Orner 1992). In the traditional classroom, teachers are viewed as authorities by virtue of their expertise in a particular field. Hence, as they impart knowledge to students, a hierarchical relationship arises between teachers and students. Unlike traditional classrooms however, in a poststructural feminist classroom, authority can arise from a variety of sources, sometimes from students or sometimes from teachers. In other words, poststructural feminist educators attempt to develop

students' authority and view knowledge as socially constructed and culturally-bound. Fostering multiple authorities allows different classroom dynamics and voices to emerge (Bakhtin 1981; English 2005; Foucault 1982; Maher and Tetreault 1994; Tisdell 2000). Moreover, poststructural feminist classrooms celebrate "difference," establishing an atmosphere in which all participants are treated with respect and are encouraged to express their points of view. This classroom intends to encourage multiple forms of participation in class interactions (Bakhtin 1981). Furthermore, poststructural feminist pedagogues consider that the communication and learning taking place in the classroom should be the responsibility of both teachers and students (English 2005). By blurring the lines over teacher-student responsibility and the power relations in learning and communicating, the notion that students should be silent recipients of knowledge and teachers powerful speakers is removed (Ropers-Huilman 1998, 2003). Hence, both teachers and students undertake and share the responsibility to be knowledge negotiators, rather than solely knowledge "providers" or "takers."

The above research uses discourse analysis to realize the function of feminist pedagogy or poststructural feminist pedagogy to overturn the commonly accepted authoritative system. The current study does not find any research using poststructural feminist pedagogy on English language ability, and few researchers have used qualitative or quantitative analysis to demonstrate the instruction effect. Falk-Rafael et al. (2004) used qualitative data and pretest–posttest research design to demonstrate the effectiveness of feminist pedagogy in empowering a community of learners to make changes in their personal and professional lives. Derived from critical literacy and feminist pedagogy, Chow et al. 2003 employed the feminist DPE approach to increase students' willingness to work together with teachers. The research results show that applying the approach to school courses creates a more equitable and empowering classroom community.

To sum up, a poststructural feminist classroom should become a place in which there is a sense of struggle. In this classroom, teachers and students can work together to overcome the estrangement and alienation that have long become the norm in the contemporary education system. Most importantly, after recognizing students' resistance to the traditional processes, along with their individual differences, teachers can help these marginalized students engage in their learning process to work against the existing patriarchal education system and further, to deconstruct and transform it to a democratic learning atmosphere.

With the aim of transforming the negative effects of power imbalances within the classroom into positive ones, and giving VTE students a voice in their learning environment, the researchers intend to create an egalitarian poststructural feminist classroom: one which aims to downplay the teacher's authority by attempting to provide a positive participatory learning environment, initiate empowerment and subjectivity, incorporate life experiences into teaching, listen to students' voices, foster dialogical interactions, embrace diversity, and focus on constant self-reflection. Through a series of literature reviews, an experimental poststructural feminist pedagogical dynamic model was developed by the researchers. The model is shown in Fig. 1 and described as follows.

Creating a positive participatory learning environment

Poststructural feminist pedagogy fosters a safe and comfortable non-competitive space, in which higher levels of trust, personal commitment, and democratic dialogue are possible. The collaborative learning process facilitates students' direct involvement and contribution, encouraging both students and teachers to work together toward improving learning outcomes for all students.

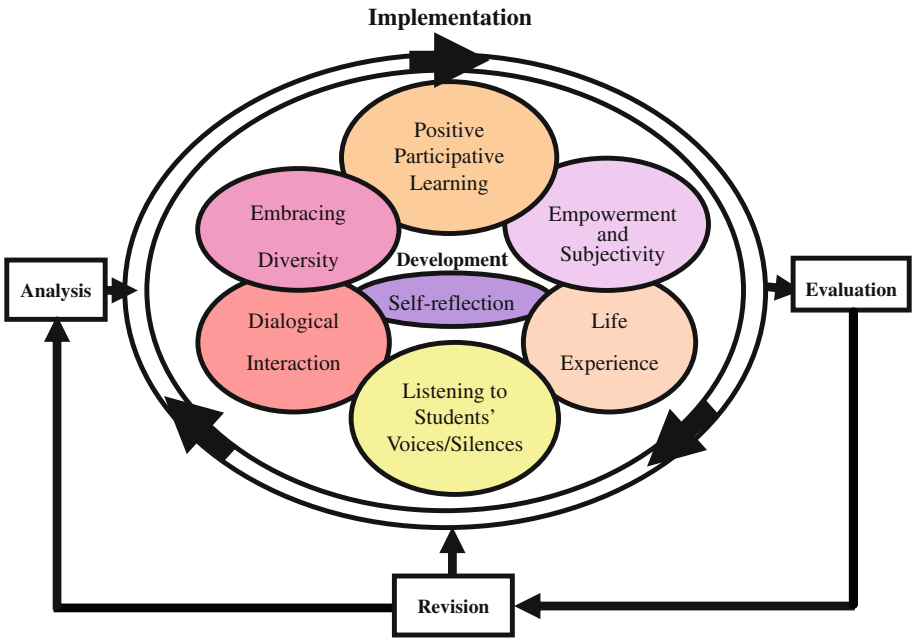

Fig. 1 Experimental poststructural feminist pedagogical dynamic model

Initiating empowerment and subjectivity

"Empowerment" is a key concept in the poststructural feminist classroom, which seeks to interrupt reinforced patriarchal dominance in the classroom and empower students, ensuring that every student has equal opportunities to express their opinions and influence class decision-making.

Incorporating life experiences into teaching

Students find their voice most naturally when the material they are studying is relevant and connected to their lives. Teaching practices that incorporate life experiences of students help students link their past knowledge and experience to existing knowledge and to further reconstruct what they already know.

Listening to students' voices/silences

Poststructural feminist pedagogues engage in purposeful listening to student voices, either speaking voices or silent voices. Encouraging students to speak out in public and ask questions helps students become more visible and define themselves as authors of their own world.

Fostering dialogues

Developing an egalitarian classroom can best be accomplished through dialogue interactions, the key to liberating education. The central goal of dialogical practice in the poststructural feminist classroom is to be open to multiple viewpoints through communication and interaction. Dialogues give students an opportunity to have their voices heard.

Embracing diversity

Both teachers and students should recognize and respect the reality that students enter the classroom with different levels of power. These power differences exist among students as well as between students and the teacher. Hence, teachers should appreciate differences among students, such as racial difference, gender difference, skill difference, etc.

Focusing on self-reflection in instructional process and identity development

Self-reflections enable teachers and students to scrutinize their own identities and further examine the identities of others. Through mutual self-reflection, both teachers and students realize how unjust knowledge and identities build up in an authoritative society, raising their self-consciousness to further understand multiple, overlapping, and contradictory aspects of identities and knowledge construction.

Figure 1 shows this experimental poststructural feminist pedagogical dynamic model as a system organized into various subsystems, including system analysis, system development, system implementation, system evaluation, and system revision. Subsystem revision causes the whole poststructural feminist pedagogical system to become a cyclic instructional system, self-corrective over time. Teachers constantly reflecting upon their curricula-planning and instructional process in light of the development and implementation subsystems cause the subsystems to become cyclic loops. Therefore, the whole poststructural feminist pedagogical model can become a dynamic system with multiple feedback loops running within the model.

By applying poststructural feminist pedagogy to VTE English classes, this study tests the following research hypotheses:

1. VTE college students in the poststructural feminist English class have better English learning achievements than those in the traditional English class.
2. VTE college students in the poststructural feminist English class have better critical thinking ability than those in the traditional class.
3. VTE college students in the poststructural feminist English class express greater satisfaction with their class than those in the traditional class.

Methodology

Sample and experimental design

In this study, a quasi-experimental design was used because random assignment of students to classes was impossible. In this research, two homogeneous classes and normally

distributed classes were chosen as the experimental group and the control group. The two classes were homogenous in pre-test results of the English achievement test and the critical thinking ability test (see Tables 3, 5). At the beginning of the experiment, the researchers had no choice to assign/distribute the students to classes. However, the two classes were normally distributed in that while students entering the school, the school administration office of the university under study had already normally distributed the students into the two classes, based on the students' scores in the college entrance examination. A coin toss determined that class 1B was chosen as the experimental group, while class 1A was regarded as the control group. A total of 111 freshmen at a VTE institute in central Taiwan participated in this study. 57 participants, 42 female students and 15 male students, were in the control group and 54 participants, 25 female students and 29 male students, were in the experimental group. The participants were students in the banking and risk management department, who had studied English for at least 6 years starting in junior high school. Upon graduation, these students are expected to become professionals in the field of banking and risk management.

During the experimental period, both the control group and the experimental group were taught by the same teacher. Although both groups received the same teaching materials, homework, and tests, only the experimental group's instruction was based on the post-structural feminist pedagogy, in which the experimental poststructural feminist dynamic model was applied (See Fig. 1), and the control group received instruction following the traditional methods. The experiment lasted for eight weeks, three periods a week, from February 23rd to April 13th 2006. The teaching materials used in these two classes were mainly from *Project Achievement Reading*, published by Scholastic Inc. and from Longman English Interactive, developed by Pearson Longman ESL.

The control group students' instruction, mainly featured traditional teaching methods of grammar translation and lecturing. In this classroom, the teacher tended to analyze the grammatical construction of every single sentence or single phrase and expected the students to know the meaning of every single word. Hence, the entirety of the instruction was limited to an activity performed by an authority serving as information provider, who stood in the front of a classroom and verbally distributed factual information to students, i.e. lecturing. The students on the other hand, were required to sit silently and attentively in rows. Memorization was still the main feature. However, in the experimental group, the teacher in this class served as a facilitator as well as a monitor, working around the groups to offer guidance and assistance. Unlike the control group, the seats in the experimental group were arranged in circles so that students could have immediate interactions with peers and the teacher. The teaching procedure for the experimental group is shown in Table 1.

The teaching procedure for the control group was shown in Table 2.

Instrument, validity, and reliability

English learning achievement test

All participants had to take the pre-test and post-test based on the database of the comprehensive Longman English interactive (LEI) integrated-skills software program. The LEI English program was developed by Pearson Longman ESL, a leading publisher of language programs for learners of English as a Second Language, and was reviewed by many experienced English teachers and experts, including Prof. Bakin, Prof. Biache, Prof. Rost, Prof. Chapelle, and Prof. Jamieson in 2004. The LEI testing program is a valid testing

Table 1 Teaching procedure for the experimental group

Instructional procedure	Instructional focus
Initiate motivation	Inform learning outcomes
	Analyze what is to be learned
	Increase interest with the use of novel, surprising, incongruous, and conflicting events
	Use humor to break up monotony and maintain interest
	Illustrate how the learning result will be of positive value to them
Maintain a positive learning climate	Create a learning community in which individual differences are respected and celebrated
	Promote appropriate classroom participation
	Listen thoughtfully and responsively
	Facilitate students working productively and cooperatively with each other
	Promote incorporating life experiences/prior knowledge into the learning process
	Engage students in developing critical thinking and problem-solving abilities
	Vary the teacher's role during the instructional process—as instructor, facilitator, coach, or audience
Recall prior knowledge	Identify the relevance of prior knowledge
	Illustrate how students' prior knowledge/experience influences their learning
	Integrate new knowledge and skills into real life to produce a positive effect
Present stimulus material	Specify learning contexts
	Foster relevance to real-life tasks
	Create real-world experiences for students
	Provide a diversity of instructions to meet the needs of diverse students
Conduct process evaluation	Conduct critical thinking ability tests
	Conduct English learning achievement tests
	Conduct in-depth student interviews with individuals or groups
	Conduct classroom observations
Provide feedback & modification	Monitor and adjust strategies in response to learners' feedback
	Analyze individual and group performance to adjust instruction based on students' responses and needs
	Reflect upon feedback for revision and material preparation, if necessary
	Make instructional modifications to meet students' needs and to facilitate optimal learning for all students
Conduct summative evaluation	Evaluate teaching resources and strategies for comprehensibility, inclusion, and appropriateness for students
	Involve students in self-assessment activities to create awareness of their strengths and needs and encourage them to establish their personal learning goals
	Evaluate learning outcomes and re-diagnose learning needs

program presented in well-organized sections evaluating a range of areas, including grammatical content, reading skills, comprehension, vocabulary, etc. This study tests and verifies homogeneity between the control group and the experimental group by administering an English pre-test and a critical thinking ability pre-test to both the control group and the experimental group. The English pre-test covered listening, vocabulary, grammar,

Table 2 Teaching procedure for the control group

Instructional procedure	Instructional focus
Initiate motivation	Inform learning outcomes
	Analyze what is to be learned
	Illustrate how the learning result will be of positive value to them
Recall prior knowledge	Identify the relevance of prior knowledge
	Illustrate how students' prior knowledge/experience influences their learning
Present material	Specify learning contexts
	Provide instructions
Conduct process evaluation	Conduct quizzes, tests, and examinations
Provide feedback & modification	Analyze individual performance to adjust instruction based on the results of quizzes, tests, and examinations
	Reflect upon feedback for revision and material preparation, if necessary
	Make instructional modifications to meet students' need
Conduct summative evaluation	Evaluate learning outcomes and re-diagnose learning needs

Table 3 Independent *t*-test results of the pre-test on the English learning achievement test

Group	Mean	SD	*t*	*p* Value
Experiment	45.02	5.19	1.09	0.27
Control	46.14	5.60		

The test of critical thinking ability

and reading sections. There were fifteen multiple-choice questions in the listening section and in the reading section respectively. Each question counted two points, totaling 30 points for the listening section and 30 points for the reading section. There were twenty multiple choices in the vocabulary section; each question counted one point, totaling 20 points in the section. There were ten multiple choice in the grammar section; each question counted two points, totaling 20 points for the section. The pre-test results of the English learning achievement test, shown in Table 3, showed that both groups were at about the same English proficiency level.

The test of critical thinking ability

Critical thinking ability pre- and post-tests were used to measure the students' knowledge of critical skills and ability to speak out after participating in the poststructural feminist classroom. The major advantage of critical thinking ability tests lies in the freedom they give students to express themselves and show their capacity to organize, synthesize and express knowledge (Tuckman 1991). Critical thinking is a type of reasoning and reflective thinking which focuses on deciding what to believe or what to do (Ennis 1984). The tests were administered in essay format to allow students to freely express their ideas, demonstrate interrelationships among their ideas, and generate higher level critical thinking, using their own methods and organization (Criswell and Criswell 2004; Ennis 1984). Moreover, in this kind of test, students are offered the chance to generate responses with the potential to show their originality and lead a greater understanding of the topic

(Walstad and Becker 1994). In this study, before taking the critical thinking ability pre- and post-test, students were informed that since each of them would have their unique opinion there were no right or wrong answers to the test questions. That is, the pre- and post-tests both invited students to explore relevant issues and to express their opinions as much as they could. Below is an example of the critical thinking test.

Case example: hunting: great hunting debate

> Example—Some people believe that hunting is an important form of recreation or sport, while others disapprove of "killing for fun." Do you think it is good to go hunting? Do you think hunting keeps nature in balance or out of balance?

The critical thinking ability pre-test and post-test were administered for 30 min and initially reviewed by three experienced English teachers. After the test, the completed papers were graded by two independent graders on the basis of the evaluation criterion for critical thinking ability developed by the researchers. There was one essay question in the critical thinking pre-test and post-test. The critical thinking test covers five sections: length, focus, content, organization, and style. Each section counts 10 points. Hence, the possible highest score is 50 points. Table 4 illustrates the critical thinking ability test scoring guide.

The pre-test results of the critical thinking ability test, shown in Table 5, showed that both groups were at about the same critical thinking ability.

The measure of the Pearson product-moment correlation between the first and the second grader is reported in Table 6. The resulted correlation coefficient reflects the overall agreement between the two graders. Based on the inter-rater comparisons, the reliability estimates are between 0.70 and 0.89, and all the p-values are less than 0.01, which shows that the critical thinking ability test yields consistent and reliable results.

Student satisfaction questionnaire

After the literature review, the student satisfaction questionnaire used in this study was mainly developed from the student questionnaires of Flinders University (2001), Bucker (2004), and St. Ambrose University (2006). In order to establish the validity of the items on the questionnaires, the initial questionnaire was first read by fifty-eight students, majoring in banking and risk management, to ensure that the respondents could understand the questions without any ambiguity. Ten questions were deleted because they were unclear or ambiguous. Next, the questionnaire was reviewed by three experienced English teachers whose feedback resulted in the deletion of 28 questions and some modifications to make other questions clearer. The contents of the questionnaire were thus revised and finalized to 34 questions with a five-point Likert scale varying from strongly disagree to strongly agree. Later a pilot study was conducted with the same 58 students to assure the reliability of the constructs of the questionnaire, after which the researchers examined the reliability of the student satisfaction questionnaire. In addition, this study also used Cronbach Alpha to test reliability within each category of the questionnaire. The overall Cronbach Alpha reliability of the student satisfaction questionnaire was 0.95, and the Cronbach Alpha values of the instructional objective, instructional material/method, teacher's qualities, climate/environment, and assessment were 0.78, 0.89, 0.82, 0.87, and 0.78 respectively (see Table 7). Generally speaking, a reliability of 0.7 is a minimally acceptable level of reliability, and 0.8 or greater is preferable (Hair et al. 2003).

Table 4 Critical thinking ability test scoring guide

Score	Criteria
10-9	Length—10: above 225 words; 9: 201–225 words
	Focus—effectively and exactly addressing the writing task
	Content—using exactly appropriate details to support topics or illustrate ideas
	Organization—exactly well-organized and well-developed
	Style—using exactly appropriate words and tones
8-7	Length—8: 176–200 words; 7: 151–175 words
	Focus—addressing most of the writing task
	Content—using appropriate details to support topics or illustrate ideas
	Organization—generally well-organized and well-developed
	Style—using appropriate words and tones
6-5	Length—6: 126–150 words; 5: 101–125 words
	Focus—addressing the writing task adequately but sometimes straying from the task
	Content—using some details to support topics or illustrate ideas
	Organization—mostly adequately well-organized and well-developed
	Style—using adequate but sometimes inappropriate words and tones
4-3	Length—4: 76–100 words; 3: 51–75 words
	Focus—inadequately addressing the writing task
	Content—using inappropriate or insufficient details to support topics or illustrate ideas
	Organization—insufficiently well-organized and well-developed
	Style—using inappropriate words or tones
2-1	Length—2: 26–50 words; 1: below 25 words
	Focus—having problems with focus or failing to address the writing task
	Content—using few or no details or irrelevant details to support topics or illustrate ideas
	Organization—seriously disorganized or underdeveloped
	Style—severe writing errors and unclear tones

Table 5 Independent *t*-test results of the pre-test on the critical thinking ability test

Group	Mean	SD	*t*	*p* Value
Experiment	13.86	2.08	−0.71	0.47
Control	14.16	2.35		

Table 6 Interrater reliability between the 1st and 2nd rater of critical thinking ability test

Test	Correlation coefficient	*p* Value
Length	0.89	0.00**
Focus	0.78	0.00**
Content	0.79	0.00**
Organization	0.79	0.00**
Style	0.70	0.00**
Overall	0.83	0.00**

** $p < 0.01$

Table 7 Reliability coefficients for the categories on the student satisfaction questionnaire

Category	Mean	SD	Cronbach alpha
Instructional objective	11.67	2.25	0.78
Instructional material/method	57.20	6.62	0.89
Teacher's qualities	21.42	2.49	0.82
Class climate/environment	33.23	4.45	0.87
Assessment	16.19	2.46	0.78
Overall	139.73	15.55	0.95

Table 8 Pearson correlation coefficient analysis of the pilot study on the student satisfaction questionnaire

	Instructional objective	Teaching material/method	Teacher's qualities	Class climate/environment	Assessment
Instructional objective	1	0.62	0.47	0.51	0.49
Teaching material/method	0.00**	1	0.79	0.79	0.72
Teacher's qualities	0.00**	0.00**	1	0.69	0.67
Class climate/environment	0.00**	0.00**	0.00**	1	0.74
Overall	0.00**	0.00**	0.00**	0.00**	1

The value above the "1" is the correlation coefficient; the value below the "1" is the p-value

** $p < 0.01$

Also, after the pilot study, the Pearson correlation coefficient between any two categories in the student satisfaction questionnaire was calculated; these are shown in Table 8. As a result, the correlation coefficients in the pilot study are between 0.47 and 0.79. The p-value is less than 0.01, which indicates that there is a significant correlation between any two categories in the student satisfaction questionnaire.

Initial and subsequent in-depth student interviews with individuals or groups

Compared with other methods, interviews allow for greater depth of data collection (Cohen and Manion 1994). This study used student interviews to triangulate the quantitative results of the student satisfaction questionnaire. Following the techniques of semi-structured interviews, this work conducted in-depth interviews with randomly selected students after the end of each poststructural feminist English section to collect qualitative data on the possible difficulties and advantages of using this pedagogy. Fifty four students, 25 females and 29 males, were interviewed. Sample questions included, "Do you have language anxiety or psychological barriers to overcome while expressing your opinions in class? Why or why not?" and "Do you always express your opinions in class? Why or why not?" and "During class instruction, do you feel teachers care more about some certain students? If yes, who are they?" The initial interviews, lasting for approximately 30–40 min, allowed the researchers to establish a rapport with the participants. Subsequent interviews were less structured to allow participants to elaborate about their experiences within the poststructural feminist English classroom. In the last interview session, participants were encouraged to expand on specific information that was needed to sum up their experience with

this pedagogy. For the student uncomfortable with the individual interview, group interviews were also acceptable. To foster a comfortable and secured interviewing environment, all interviews were conducted in Mandarin Chinese and were not audio taped, but only memo-noted. To protect the identities of participants and foster a comfortable English classroom, this work used pseudonyms for the interviewees. Moreover, in order to generate convincing interpretations, after translating the interviews, the researchers asked a bilingual teacher to examine the translated data.

Data analysis

The collected data were analyzed quantitatively and qualitatively. The quantitative data was analyzed using SPSS (Statistical Packages for the Social Science), with an independent sample *t*-test used to determine if there were any statistically significant differences in the means between the students in the traditional classroom and the students in the poststructural feminist classroom, in terms of English learning achievement, critical thinking ability, and student satisfaction. The descriptive statistical techniques include the mean and the standard deviation. Also, using Cohen's *d* formula (Cohen 1988), this research calculated the effect sizes of post-tests of the experimental group and the control group to indicate the practical significances of the results. This study also used a *t*-test to examine the learning gains between the pre-test and post-test scores for the two groups on the variables. On the basis of building a holistic and complex understanding of students' reactions and classroom interactions, qualitative data analysis was also used. The qualitative results of the interviews were transcribed, analyzed, and synthesized in order to help researchers understand students' opinions and reflections of the poststructural feminist English class.

Results

The research results showed that the poststructural feminist pedagogy was effective in improving students' learning achievement and critical thinking ability and also that the students accepting the poststructural feminist instruction expressed greater satisfaction with their class instruction than those in the traditional class. The results of hypothesis testing and interviews are described below.

Results of hypothesis testing

Hypothesis 1: The VTE college students in the poststructural feminist English class would have better English learning achievements than those in the traditional English class.

To test Hypothesis 1, the results of both the control group and experimental group pretests were examined by *t*-tests and compared, as shown in Table 9. In the listening, vocabulary, grammar, reading, and overall sections of the pre-test, there were no significant differences between the mean scores of the experimental group (Means = 15.63, 8.61, 8.46, 12.13, and 45.02 respectively) and the mean scores of the control group (Means = 16.30, 8.79, 8.68, 12.37, and 46.14 respectively; $p > 0.05$).

To explore the effects of the poststructural feminist pedagogy on the participants' English language ability after the experimental period, both groups' scores in the post-tests

Table 9 Independent *t*-test results on the English learning achievement pre-test and post-test

Test	Group	Pre-test		Post-test		
		Mean (SD)	*t* (*p* Value)	Mean (SD)	*t* (*p* Value)	Cohen's *d* (95% CI)
Listening	Experiment	15.63 (3.68)	−0.98	21.11 (3.74)	3.10	0.59
	Control	16.30 (3.50)	(0.32)	18.96 (3.55)	(0.00**)	(0.20, 0.96)
Vocabulary	Experiment	8.61 (2.54)	−0.34	14.85 (2.52)	2.75	0.52
	Control	8.79 (2.96)	(0.73)	13.58 (2.35)	(0.00**)	(0.13, 0.89)
Grammar	Experiment	8.46 (2.57)	−0.48	13.09 (2.84)	5.06	0.96
	Control	8.68 (2.11)	(0.62)	10.60 (2.34)	(0.00**)	(0.54, 1.33)
Reading	Experiment	12.13 (3.92)	−0.35	22.20 (5.05)	2.28	0.43
	Control	12.37 (3.07)	(0.72)	20.02 (5.03)	(0.02*)	(0.05, 0.80)
Overall	Experiment	45.02 (5.19)	1.09	71.26 (8.30)	5.71	1.09
	Control	46.14 (5.60)	(0.27)	63.14 (6.50)	(0.00**)	(0.67, 1.46)

Experimental group: $N = 54$; control group: $N = 57$

* $p < 0.05$, ** $p < 0.01$

were examined again via *t*-tests. After the experiment, there were significant differences between the two groups in the English learning achievement test, as shown in Table 9. In the listening, vocabulary, and grammar sections of the post-test, the mean scores of the experimental group (Means = 21.11, 14.85, and 13.09) were significantly higher than the mean score of the control group (Means = 18.96, 13.58, and 10.60; $p < 0.01$). In the reading section of the post-test, the mean score of the experimental group (Mean = 22.20) was significantly higher than the mean score of the control group (Mean = 20.02; $p < 0.05$). Overall, notably, in the post-test, the mean score of the experimental group (Mean = 71.26) was significantly higher than the mean score of the control group (Mean = 63.14; $p < 0.01$).

Using Cohen's *d* formula, effect sizes of the post-tests of the experimental group and the control group were also calculated to indicate the practical significances of the results (see Table 9). Generally, the larger the effect size, the greater the impact of intervention. Cohen (1988) suggests that an effect size between 0.2 and 0.5 indicates a small effect size, an effect size between 0.5 and 0.8 indicates a moderate effect size, and an effect size greater than 0.8 indicates a large effect size. The effect size on reading was 0.43, indicating a small effect size. The effect sizes on listening (0.59) and vocabulary (0.52) were moderate. The effect sizes on grammar (Cohen's $d = 0.96$) and overall test (1.09) were large.

A *t*-test was also used to examine learning gains between the pre-test and post-test scores for the experimental group and the control group on variables, shown in Table 10. Comparison between learning gains of the experimental group and the control group show that the learning gains on vocabulary and reading sections (6.24 and 10.07) of the experimental group were significantly higher than those (4.79 and 7.65; $p < 0.05$) in the control group. The learning gains on listening, grammar, and overall sections (5.48, 4.63, and 26.24) were significantly higher than those (2.67, 1.91, and 17.00; $p < 0.01$) of the control group. This means that the experimental student group significantly improved their scores after going through the poststructural feminist class compared to those in the control classes.

Table 10 Significant differences in learning gains on the English learning achievement between the experimental and control group

Test	Learning gain		*p* Value	Test	Learning gain		*p* Value
	Experiment	Control			Experiment	Control	
Listening	5.48	2.67	0.003**	Reading	10.07	7.65	0.025*
Vocabulary	6.24	4.79	0.027*	Overall	26.24	17.00	0.000**
Grammar	4.63	1.91	0.000**				

Experimental group: $N = 29$; control group: $N = 15$

* $p < 0.05$, ** $p < 0.01$

Table 11 Male students' independent *t*-test results on the English learning achievement pre-test and post-test

Test	Group	Pre-test		Post-test		
		Mean (SD)	*t* (*p* Value)	Mean (SD)	*t* (*p* Value)	Cohen's *d* (95% CI)
Listening	Experiment	15.14 (3.61)	−0.62	20.45 (3.78)	2.20	0.59
	Control	15.87 (3.74)	(0.53)	18.47 (2.17)	(0.03*)	(−0.55, 1.22)
Vocabulary	Experiment	8.62 (2.69)	−0.74	14.41 (2.31)	0.95	0.30
	Control	9.27 (2.84)	(0.46)	13.67 (2.72)	(0.34)	(−0.33, 0.92)
Grammar	Experiment	8.48 (2.54)	−0.76	12.34 (3.07)	3.33	1.06
	Control	9.07 (2.12)	(0.45)	9.33 (2.29)	(0.00**)	(0.38, 1.70)
Reading	Experiment	12.62 (4.11)	−0.55	21.21 (5.14)	0.19	0.06
	Control	13.13 (2.00)	(0.58)	20.87 (5.84)	(0.84)	(−0.56, 0.69)
Overall	Experiment	44.86 (5.64)	−1.27	68.41 (8.01)	2.42	0.77
	Control	47.33 (6.90)	(0.20)	62.33 (7.63)	(0.02*)	(0.11, 1.40)

Experimental group: $N = 29$; control group: $N = 15$

* $p < 0.05$, ** $p < 0.01$

While further investigating the results of the English learning achievement test in terms of gender, the researchers found that in the listening, vocabulary, grammar, reading, and overall sections of the pre-test, as shown in Table 11, there were no significant differences between the mean scores of the male students in the experimental group (Means = 15.14, 8.62, 8.48, 12.62, and 44.86 respectively) and the mean scores of the male students in the control group (Means = 15.87, 9.27, 9.07, 13.13, and 47.33 respectively; $p > 0.05$).

However, after the experimental period, there were some significant differences between the two groups in the English learning achievement test. As shown in Table 11, in the grammar section, the mean score of the male students in the experimental group (Mean = 12.34) was significantly higher than that in the control group (Means = 9.33; $p < 0.01$). In the listening section, the mean score of male students in the experimental group (Mean = 20.45) was significantly higher than that in the control group (Mean = 18.47; $p < 0.05$). However, in the vocabulary and reading sections, though the mean scores of the male students in the experimental group (Means = 14.41 and 21.21) were higher than the means scores of the male students in the control group (Mean = 13.67 and 20.87; $p > 0.05$), the improvements do not reach statistic significance.

Table 12 Significant differences in learning gains on the English learning achievement between the male students in the experimental and control group

Test	Gain		*p* Value	Test	Gain		*p* Value
	Experiment	Control			Experiment	Control	
Listening	5.31	2.60	0.068	Reading	8.59	7.73	0.669
Vocabulary	5.79	4.40	0.206	Overall	23.55	15.00	0.003**
Grammar	3.86	0.27	0.006**				

Experimental group: $N = 29$; control group: $N = 15$

* $p < 0.05$, ** $p < 0.01$

Overall, in the post-test, the mean score of the male students in the experimental group (Mean = 68.41) was significantly higher than the mean score of the male students in the control group (Mean = 62.33; $p < 0.05$).

While calculating the effect sizes of the post-tests of male students in the experimental group and the control group (see Table 11), the effect size on reading (0.06) was trivial. The effect size on vocabulary (0.30) was small. The effect size on listening (0.59) was moderate. The effect sizes on grammar (1.06) and the overall test (0.77) were large.

Comparison between learning gains of male students in the experimental group and the control group showed that learning gains in the grammar and overall test (3.86, 23.55) of the experimental group were significantly higher than those (0.27, 15.00; $p < 0.01$) in the control group (see Table 12). Although the learning gains on listening, vocabulary, and reading (5.31, 5.79, and 8.59) of the experimental group were higher than those (2.60, 4.40, and 7.73) of the control group, the learning gain differences did not reach statistical differences.

As for the female students' performance in the English learning achievement test, shown in Table 13, in the listening, vocabulary, grammar, and reading, and overall sections of the pre-test, there were no significant differences between the mean scores of the female students in the experimental group (Means = 16.20, 8.60, 8.44, 11.56, and 45.20 respectively) and the mean scores of the female students in the control group (Means = 16.45, 8.62, 8.55, 12.10, and 45.71 respectively; $p > 0.05$). After the intervention of the poststructural feminist pedagogy in the experimental group, there were significant differences between the female students in these two groups in the English learning achievement test (See Table 13). In the listening, vocabulary, grammar, and reading sections of the post-test, the mean scores of the female students in the experimental group (Means = 21.88, 15.36, 13.96, and 23.36 respectively) were significantly higher than those in the control group (Means = 19.14, 13.55, 11.05, and 19.71 respectively; $p < 0.01$). Overall, in the post-test, the mean score of the female students in the experimental group ($M = 74.56$) was also significantly higher than that in the control group ($M = 63.43$; $p < 0.01$).

Comparing the effect sizes of the post-tests of female students in the experimental group and the control group (see Table 13), the effect sizes on listening (0.72), vocabulary (0.75), and reading (0.77) were moderate, and the effect sizes on grammar (1.29) and the overall test (1.67) were large.

While using the *t*-test to examine learning gains between female students in the experimental group and control group, as sown in Table 14, the learning gains on listening and vocabulary (5.68, 6.76) of the experimental group were significantly higher than those

Table 13 Female students' independent *t*-test results on the English learning achievement pre-test and post-test

Test	Group	Pre-test		Post-test		
		Mean (SD)	*t* (*p* Value)	Mean (SD)	*t* (*p* Value)	Cohen's *d* (95% CI)
Listening	Experiment	16.20 (3.75)	−0.28	21.88 (3.62)	2.83	0.72
	Control	16.45 (3.44)	(0.78)	19.14 (3.94)	(0.00**)	(0.19, 1.21)
Vocabulary	Experiment	8.60 (2.42)	−0.02	15.36 (2.71)	2.95	0.75
	Control	8.62 (3.01)	(0.97)	13.55 (2.24)	(0.00**)	(0.22, 1.24)
Grammar	Experiment	8.44 (2.65)	−0.18	13.96 (2.32)	5.12	1.29
	Control	8.55 (2.11)	(0.85)	11.05 (2.21)	(0.00**)	(0.72, 1.80)
Reading	Experiment	11.56 (3.69)	0.60	23.36 (4.79)	3.03	0.77
	Control	12.10 (3.35)	(0.54)	19.71 (4.74)	(0.00**)	(0.24, 1.26)
Overall	Experiment	45.20 (4.72)	−0.41	74.56 (7.49)	6.61	1.67
	Control	45.71 (5.08)	(0.68)	63.43 (6.13)	(0.00**)	(1.06, 2.20)

Experimental group: $N = 25$; control group: $N = 42$

* $p < 0.05$, ** $p < 0.01$

Table 14 Significant differences in learning gains on the English learning achievement between the female students in the experimental and control group

Test	Learning gain		*p* Value	Test	Learning gain		*p* Value
	Experiment	Control			Experiment	Control	
Listening	5.68	2.69	0.022*	Reading	11.80	7.62	0.002**
Vocabulary	6.76	4.93	0.040*	Overall	29.36	17.71	0.000**
Grammar	5.52	2.50	0.001**				

Experimental group: $N = 25$; control group: $N = 42$

* $p < 0.05$, ** $p < 0.01$

(2.69, 4.93; $p < 0.05$) in the control group. The learning gains in grammar, reading, and overall performance (5.52, 11.80, and 29.36) were significantly higher than those (2.50, 7.62, 17.71; $p < 0.01$) in the control group. This means that female students in the experimental group significantly improved their scores after going through the poststructural feminist class compared to those in the control classes.

From Tables 13 and 14, it can be seen that the female participants receiving the poststructural feminist pedagogy significantly outperformed those receiving the traditional English instruction. That is, the poststructural feminist pedagogy in this study had a positive effect on the female participants' English language ability.

In conclusion, from the data shown in Tables 9, 10, 11, 12, 13, 14, it is clearly demonstrated that those receiving the poststructural feminist pedagogy outperformed those receiving the traditional English instruction. Therefore, it can be inferred that this pedagogy gives students more confidence and has more positive effects on the development of English academic performance.

Hypothesis 2: The VTE college students in the poststructural feminist English class would have developed better critical ability than those in the traditional class.

Table 15 Independent *t*-test results on the critical thinking ability pre-test and post-test

Test	Group	Pre-test		Post-test		
		Mean (SD)	*t* (*p* Value)	Mean (SD)	*t* (*p* Value)	Cohen's *d* (95% CI)
Length	Experiment	2.24 (0.43)	0.15	9.77 (0.60)	75.89	14.65
	Control	2.22 (0.42)	(0.87)	2.91 (0.29)	(0.00**)	(12.39, 16.23)
Focus	Experiment	3.59 (0.67)	−1.83	6.67 (0.44)	16.81	3.19
	Control	3.80 (0.56)	(0.07)	4.99 (0.60)	(0.00**)	(2.56, 3.66)
Content	Experiment	3.38 (0.59)	−0.65	6.03 (0.33)	11.79	2.21
	Control	3.46 (0.69)	(0.51)	5.03 (0.54)	(0.00**)	(1.69, 2.62)
Organization	Experiment	3.11 (0.48)	−1.02	6.04 (0.37)	10.35	1.95
	Control	3.21 (0.56)	(0.31)	5.07 (0.60)	(0.00**)	(1.45, 2.35)
Style	Experiment	1.52 (0.51)	0.80	3.90 (0.44)	19.78	3.75
	Control	1.44 (0.54)	(0.42)	2.20 (0.47)	(0.00**)	(3.05, 4.27)
Overall	Experiment	13.86 (2.08)	−0.71	32.44 (1.49)	36.59	6.95
	Control	14.16 (2.35)	(0.47)	20.21 (1.98)	(0.00**)	(5.82, 7.75)

Experimental group: $N = 54$; control group: $N = 57$

* $p < 0.05$, ** $p < 0.01$

To test Hypothesis 2, the results of both the control group and the experimental group pre-tests were examined by *t*-tests and compared, as shown in Table 15. In the length, focus, content, organization, style, and overall sections of the pre-test, there were no significant differences between the mean scores of the experimental group (Means = 2.24. 3.59, 3.38, 3.11, 1.52, and 13.86 respectively) and the mean scores of the control group (Means = 2.22, 3.80, 3.46, 3.21, 1.44, and 14.16 respectively; $p > 0.05$). In other words, before the instruction, these two groups were homogeneous in the critical thinking ability test on length, focus, content, organization, style and overall rating.

To explore the effects of the poststructural feminist pedagogy on the participants' critical thinking ability after the treatment, the post-test scores of both groups were examined again via *t*-tests. After the instruction period, there were significant differences between the two groups in the critical thinking ability post-test, as shown in Table 15. In the length, focus, content, organization, and style sections of the post-test, the mean scores of the experimental group (Means = 9.77, 6.67, 6.03, 6.04, and 3.90) were significantly higher than the mean scores of the control group (Means = 2.91, 4.99, 5.03, 5.07, and 2.20; $p < 0.01$). Overall, in the post-test, the mean score of the experimental group ($M = 32.44$) was significantly higher than the mean score of the control group ($M = 20.21$; $p < 0.01$). Obviously, after the application of the poststructural feminist pedagogy to their instruction, the experiment group significantly outperformed the control group in the critical thinking ability test in terms of length, focus, content, organization, style and overall performance.

Using Cohen's *d* to calculate the effect sizes of post-tests of the experimental group and the control group, as shown in Table 15, the effect sizes on length (14.65), focus (3.19), content (2.21), organization (1.95), style (3.75), and overall test (6.95) were large.

Table 16 shows learning gains from the *t*-test between the pre-test and post-test scores for the experimental group and the control group on variables. The learning gains on length, focus, content, organization, style, and overall test (7.54, 3.08, 2.65, 2.93, 2.38, and

Table 16 Significant differences in learning gains on the critical thinking ability test between the experimental and control group

Test	Learning gain		*p* Value	Test	Learning gain		*p* Value
	Experiment	Control			Experiment	Control	
Length	7.54	0.68	0.000**	Organization	2.93	1.86	0.000**
Focus	3.08	1.18	0.000**	Style	2.38	0.75	0.000**
Content	2.65	1.57	0.000**	Overall	18.58	6.05	0.000**

Experimental group: $N = 54$; control group: $N = 57$

* $p < 0.05$, ** $p < 0.01$

Table 17 Male students' independent *t*-test results on the critical thinking ability pre-test and post-test

Test	Group	Pre-test		Post-test		
		Mean (SD)	*t* (*p* Value)	Mean (SD)	*t* (*p* Value)	Cohen's *d* (95% CI)
Length	Experiment	2.31 (0.47)	−0.58	9.69 (0.76)	32.82	10.45
	Control	2.40 (0.51)	(0.56)	2.86 (0.35)	(0.00**)	(7.98, 12.42)
Focus	Experiment	3.62 (0.72)	−1.45	6.67 (0.51)	9.28	2.95
	Control	3.93 (0.59)	(0.15)	4.93 (0.73)	(0.00**)	(2.02, 3.75)
Content	Experiment	3.42 (0.59)	−0.84	5.96 (0.33)	4.92	1.88
	Control	3.63 (0.86)	(0.40)	5.13 (0.61)	(0.00**)	(1.10, 2.57)
Organization	Experiment	3.10 (0.48)	−1.44	5.91 (0.33)	5.04	1.88
	Control	3.33 (0.56)	(0.15)	5.13 (0.55)	(0.00**)	(1.10, 2.56)
Style	Experiment	1.53 (0.53)	−0.35	3.81 (0.39)	11.42	3.63
	Control	1.60 (0.66)	(0.72)	2.10 (0.60)	(0.00**)	(2.58, 4.51)
Overall	Experiment	13.99 (2.19)	−1.18	32.05 (1.80)	19.35	6.16
	Control	14.90 (2.79)	(0.24)	20.16 (2.18)	(0.00**)	(4.61, 7.42)

Experimental group: $N = 29$; control group: $N = 15$

* $p < 0.05$, ** $p < 0.01$

18.58) of the experimental group were significantly higher than those (0.68, 1.18, 1.57, 1.86, 0.75, and 6.05; $p < 0.01$) in the control group. This means that the experimental student group significantly improved their scores after going through the poststructural feminist class compared to those in the control classes.

While further investigating the results of the critical thinking ability post-test in terms of gender, the researchers found that in the length, focus, content, organization, style, and overall sections of the pre-test, as shown in Table 17, there were no significant differences between the mean scores of the male students in the experimental group (Means = 2.31, 3.62, 3.42, 3.10, 1.53, and 13.99 respectively) and the those in the control group (Means = 2.40, 3.93, 3.63, 3.33, 1.60, and 14.90 respectively; $p > 0.05$).

However, after the instruction period, there were significant differences between the two groups in the critical thinking ability post-test (See Table 17). In the length, focus, content, organization, and style ratings of the post-test, the mean scores of the male students in the experimental group (Means = 9.69, 6.67, 5.96, 5.91, and 3.81) were significantly higher than those in the control group (Means = 2.86, 4.93, 5.13, 5.13, and 2.10; $p < 0.01$).

Table 18 Significant differences in learning gains on critical thinking ability test between the male students in the experimental and control group

Test	Gain		p Value	Test	Gain		p Value
	Experiment	Control			Experiment	Control	
Length	7.38	0.47	0.000**	Organization	2.81	1.80	0.000**
Focus	3.05	1.00	0.000**	Style	2.28	0.50	0.000**
Content	2.54	1.50	0.000**	Overall	18.06	5.27	0.000**

Experimental group: $N = 29$; control group: $N = 15$

* $p < 0.05$, ** $p < 0.01$

Overall, in the critical thinking ability post-test, the mean score of the male students in the experimental group ($M = 32.05$) was significantly higher than the counterparts in the control group ($M = 20.16$; $p < 0.01$). Obviously, after the application of the poststructural feminist pedagogy to their instruction, the male students in the experiment group significantly outperformed the male students in the control group in the critical thinking ability test in terms of length, focus, content, organization, style and overall performance.

Table 17 shows the effect sizes of post-tests of male students in the experimental group and the control group. The effect sizes on length (10.45), focus (2.95), content (1.88), organization (1.88), style (3.63), and overall test (6.16) were large.

This study also used a t-test to examine learning gains between the pre-test and post-test scores for male students in the experimental group and the control group on variables. Table 18 shows that the learning gains for length, focus, content, organization, style, and overall test (7.38, 3.05, 2.54, 2.81, 2.28, and 18.06) of male students in the experimental group were significantly higher than those (0.47, 1.00, 1.50, 1.80, 0.50, and 5.27; $p < 0.01$) of the control group.

As for the female students' performance in the critical thinking ability pre-test, there were no significant differences (See Table 19) between the mean scores of the female students in the experimental group (Means = 2.16, 3.56, 3.34, 3.14, 1.52, and 13.72) and the means scores of the females in the control group (Means = 2.16, 3.76, 3.40, 3.17, 1.39, 13.90; $p > 0.05$).

However, after the instruction period, there were significant differences between the two groups in the critical thinking ability post-test (See Table 19). In the length, focus, content, organization, and style ratings of the post-test, the mean scores of the female students in the experimental group (Means = 9.88, 6.68, 6.12, 6.20, 4.02) were significantly higher than those in the control group (Means = 2.92, 5.01, 5.00, 5.06, 2.23; $p < 0.01$). Overall, in the critical thinking ability post-test, the mean score of the experimental group ($M = 32.90$) was significantly higher than the mean score of the control group ($M = 20.23$; $p < 0.01$). Obviously, after the instruction, the female students in the experimental group brilliantly outperformed those in the control group in the length, focus, content, organization, style, and overall ratings.

Table 19 shows using Cohen's d to calculate the effect sizes of post-tests of female students in the experimental group and the control group. The effect sizes on length (24.06), focus (3.40), content (2.44), organization (2.13), style (4.10), and overall test (7.81) were large.

Comparison between learning gains of female students of the experimental group and the control group showed that learning gains on length, focus, content, organization, style,

Table 19 Female students' independent *t*-test results on the critical thinking ability pre-test and post-test

Test	Group	Pre-test		Post-test		
		Mean (SD)	*t* (*p* Value)	Mean (SD)	*t* (*p* Value)	Cohen's *d* (95% CI)
Length	Experiment	2.16 (0.37)	−0.07	9.88 (0.33)	95.24	24.06
	Control	2.16 (0.38)	(0.94)	2.92 (0.26)	(0.00**)	(19.49, 27.50)
Focus	Experiment	3.56 (0.63)	−1.38	6.68 (0.35)	13.44	3.40
	Control	3.76 (0.54)	(0.17)	5.01 (0.56)	(0.00**)	(2.57, 4.07)
Content	Experiment	3.34 (0.59)	−0.42	6.12 (0.33)	9.67	2.44
	Control	3.40 (0.62)	(0.67)	5.00 (0.52)	(0.00**)	(1.75, 3.03)
Organization	Experiment	3.14 (0.48)	−0.28	6.20 (0.35)	8.44	2.13
	Control	3.17 (0.56)	(0.77)	5.06 (0.62)	(0.00**)	(1.47, 2.69)
Style	Experiment	1.52 (0.49)	1.03	4.02 (0.47)	16.17	4.10
	Control	1.39 (0.49)	(0.30)	2.23 (0.42)	(0.00**)	(3.17, 4.85)
Overall	Experiment	13.72 (1.97)	−0.35	32.90 (0.87)	36.71	7.81
	Control	13.90 (2.16)	(0.72)	20.23 (1.93)	(0.00**)	(6.24, 9.01)

Experimental group: $N = 25$; control group: $N = 42$

* $p < 0.05$, ** $p < 0.01$

Table 20 Significant differences in learning gains on critical thinking ability test between the female students in the experimental and control group

Test	Learning gain		*p* Value	Test	Learning gain		*p* Value
	Experiment	Control			Experiment	Control	
Length	7.72	0.76	0.000**	Organization	3.06	1.88	0.000**
Focus	3.12	1.25	0.000**	Style	2.50	0.85	0.000**
Content	2.78	1.60	0.000**	Overall	19.18	6.33	0.000**

* $p < 0.05$, ** $p < 0.01$

and overall test (7.72, 3.12, 2.78, 3.06, 2.50, 19.18) of female students in the experimental group were significantly higher than those (0.76, 1.25, 1.60, 1.88, 0.85, 6.33; $p < 0.01$) of the control group (see Table 20).

In conclusion, the data in Tables 15, 16, 17, 18, 19, 20 clearly demonstrates that those students receiving the instruction based on poststructural feminist pedagogy outperformed those receiving the traditional English instruction in terms of critical thinking ability. In addition, both the male and female students in the experimental group outperformed those in the control group. Therefore, it can be inferred that this pedagogy gives both male and female students more confidence and has more positive effects on the development of their critical thinking ability.

Hypothesis 3: The VTE college students in the poststructural feminist English class would express greater satisfaction with their English class than those in the traditional class.

To test Hypothesis 3, as shown in Table 21, there were significant differences between the mean scores of the experimental group and the mean scores of the control group.

Table 21 Independent *t*-test result on the student satisfaction questionnaire

Test	Group	Mean	SD	*t*	*p* Value	Cohen's *d* (95% CI)
Instructional objective	Experiment	11.61	1.41	3.83	0.00**	0.72 (0.32, 1.09)
	Control	10.35	2.01			
Instructional material/method	Experiment	56.70	6.49	4.82	0.00**	0.91 (0.50, 1.82)
	Control	49.61	8.88			
Teacher' qualities	Experiment	21.33	3.03	4.71	0.00**	0.89 (0.48, 1.26)
	Control	18.30	3.72			
Class climate/environment	Experiment	32.87	3.91	5.01	0.00**	0.95 (0.53, 1.31)
	Control	28.65	4.93			
Assessment	Experiment	16.00	2.27	3.27	0.00**	0.62 (0.22, 0.98)
	Control	14.49	2.59			
Overall	Experiment	138.52	14.04	5.24	0.00**	0.99 (0.57, 1.36)
	Control	121.40	19.97			

Experimental group: $N = 54$; control group: $N = 57$

** $p < 0.01$

In the instructional objective, instructional material/method, teacher's qualities, class environment, and assessment section, the means scores of the experimental group (Means = 11.61, 56.70, 21.33, 32.87, 16.00) were significantly higher than the mean scores of the control group (Means = 10.35, 49.61, 18.30, 28.65, 14.49; $p < 0.01$). In overall student satisfaction, the mean score of the experimental group ($M = 138.52$) was significantly higher than the mean score of the control group ($M = 121.40$; $p < 0.01$).

Table 21 shows using the Cohen's *d* to calculate the effect sizes of student satisfaction results of the experimental group and the control group. The effect sizes on instructional objective (0.72) and assessment (0.62) were moderate. The effect sizes on instructional material/method (0.91), teacher's qualities (0.89), class climate/environment (0.95), and overall satisfaction (0.99) were large.

While further investigating the results of the student satisfaction in terms of gender, the researchers found that in the instructional objective, instructional material/method, teacher's qualities, and assessment sections, the male students in the experimental group ($M = 11.31$, 55.38, 21.24, 15.69) expressed greater satisfaction than those in the traditional class (10.33, 50.73, 19.40, 14.67), as shown in Table 22. However, these results were not significantly different for male student satisfaction. In addition, in the class climate/environment section, the mean score of the experimental group ($M = 33.07$) was significantly higher than the mean score of the control group ($M = 29.80$; $p < 0.05$). In overall student satisfaction, the mean score of the experimental group ($M = 136.69$) was significantly higher than the mean score of the control group ($M = 124.93$; $p < 0.05$).

Table 22 shows the effect sizes of male student satisfaction results of the experimental group and the control group. The effect sizes on assessment (0.42) had a value closely to moderate effect, while the effect sizes on instructional objectives (0.63), instructional material/method (0.62), teacher's qualities (0.60), class climate/environment (0.75), and overall satisfaction (0.72) were moderate.

As for the female students, as shown in Table 23, it was discovered that the female students in the experimental group expressed significantly greater satisfaction in terms of instructional objective, instructional material/method, teacher's qualities, class climate/

Table 22 Male students' independent *t*-test results on the student satisfaction questionnaire

Test	Group	Mean	SD	*t*	*p* Value	Cohen's *d* (95% CI)
Instructional objective	Experiment	11.31	1.42	1.97	0.06	0.63 (−0.02, 1.25)
	Control	10.33	1.80			
Instructional material/method	Experiment	55.38	6.93	1.93	0.06	0.62 (−0.03, 1.24)
	Control	50.73	8.65			
Teacher' qualities	Experiment	21.24	3.18	1.88	0.06	0.60 (−0.05, 1.22)
	Control	19.40	2.82			
Class climate/environment	Experiment	33.07	4.04	2.37	0.02*	0.75 (0.09, 1.38)
	Control	29.80	4.87			
Assessment	Experiment	15.69	2.33	1.31	0.19	0.42 (−0.22, 1.04)
	Control	14.67	2.66			
Overall	Experiment	136.69	14.63	2.25	0.02*	0.72 (0.06, 1.34)
	Control	124.93	19.39			

Experimental group: $N = 29$; control group: $N = 15$

* $p < 0.05$

Table 23 Female students' independent *t*-test results on the student satisfaction questionnaire

Test	Group	Mean	SD	*t*	*p* Value	Cohen's *d* (95% CI)
Instructional objective	Experiment	11.96	1.34	3.80	0.00**	0.86 (0.33, 1.36)
	Control	10.36	2.10			
Instructional material/method	Experiment	58.24	5.68	4.48	0.00**	1.13 (0.58, 1.64)
	Control	49.21	9.04			
Teacher' qualities	Experiment	21.44	2.92	3.88	0.00**	0.98 (0.44, 1.48)
	Control	17.90	3.95			
Class climate/environment	Experiment	32.64	3.83	3.88	0.00**	0.96 (0.42, 1.46)
	Control	28.24	4.94			
Assessment	Experiment	16.36	2.18	3.12	0.00**	0.79 (0.26, 1.28)
	Control	14.43	2.60			
Overall	Experiment	140.64	13.31	4.50	0.00**	1.14 (0.58, 1.64)
	Control	120.14	20.25			

Experimental group: $N = 25$; control group: $N = 42$

** $p < 0.01$

environment, and assessment ($M = 11.96$, 58.24, 21.44, 32.64, 16.36) than those in the traditional class ($M = 10.36$, 49.21, 17.90, 28.24, 14.43; $p < 0.01$). In overall student satisfaction, the mean score of the female students in the experimental group ($M = 140.64$) was significantly higher than the mean score of the female students in the control group ($M = 120.14$; $p < 0.01$).

Table 23 shows the effect sizes of female student satisfaction results of the experimental group and the control group. The effect size on assessment (0.79) had a value closed to large effect. The effect sizes on instructional objective (0.86), instructional material/method (1.13), teacher's qualities (0.98), class climate/environment (0.96), and overall satisfaction (1.14) were large.

In conclusion, from the data in Tables 21, 22, 23, it can be seen that the students in the poststructural feminist class, whether male or female, expressed greater satisfaction than those receiving the traditional English instruction. Moreover, from the results of Tables 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, it can be inferred that those students, male or female, instructed in the poststructural feminist English classroom had better English learning achievement and improvement in critical thinking ability than those exposed to the traditional instruction. Moreover, under this instruction, these students were also more satisfied with their English class than those in the traditional class.

Results of the interviews

The results of the student interviews also demonstrated that the students in the post-structural feminist class enjoyed this English class because they were given more time and opportunities to express their opinions and to interact with their classmates as well as with the teacher, Christine.

- I think this class is quite safe for me to express my own ideas although they are sometimes against the teacher's. The teacher listened to my opinions with respect without interrupting my conversation. (F2; F10; F14; F16; F17; F25; M3; M18; M29; M24; *F* Female student; *M* Male student)
- I know I am shy. When I speak English, it is not easy for me to express my ideas. But the teacher patiently waited and allowed me to finish my words. She offered me assistance to help me overcome my shyness. (F5; F9; F11; F13; F22; M3; M13; M14; M21)
- In this class, we have more time to share our experiences with either our teacher or our classmates. We are not afraid of being criticized or laughed at. The teacher said that, "All of us have the right to express our opinions, and we should appreciate our own opinions." (F3; F7; F12; F22; M4; M9; M23; M26)

Students in the poststructural feminist classroom thought that the teacher, Christine, was willing to offer adequate and additional academic aid to them. The teacher was usually available after class.

- Before, when I had problems with English grammar, I dared not ask teachers. Sometimes they would criticize my English. But now, the teacher offers assistance to me and gives me good examples to illustrate grammar. (F8; F12; F13; F15; F20; M3; M13; M14; M21)
- I like to talk with the teacher either in class or after class because she gives me a lot of assistance, both in my English and in my career development. (F19; F20; F23; F24; M1; M26; M28)
- I enjoy sitting in this class because I am allowed to express my own opinions and to work at my own pace. Even though my English is not good, the teacher always encourages me to compete with myself, not with someone else. I like being treated as an individual. (F3; F19; F22; M5; M10; M11; M21; M28)

Findings also show that most interviewees felt pleasant about learning English in the poststructural feminist English classroom, for they had more interactions with their classmates and with the teacher.

- Before, I did not have any chance to talk to the teacher in English. All I could do was sit and listen to the teacher's lecture. Now, things have been changed. I have more chances

to speak up in class, and the teacher listens to my opinion. I also have more interactions with my peers. (F3; F8; F12; F21; F24; M7; M11; M16)

- Sitting together with classmates increases the frequency of interactions in class. With face-to-face interactions with the teacher and the classmates, the whole class becomes energetic and it's hard to fall asleep in class. (F2; F8; F20; F24; M5; M6; M26; M28)
- Unlike the previous class, the whole English class becomes so comfortable, because the teacher allows students to express their opinions freely and propose their academic problems. With frequent interactions with the teacher, Christine, and my classmates, I really enjoy this kind of intimacy and partnership not seen in the traditional English class. (F2; F4; F13; F23; M8; M10: M27; M29)

However, there are still some negative comments toward the class.

- I really enjoy this class. But you know, in order to let me get involved and speak up in the class, I have to spend more time to study; hence sometimes I am quite exhausted. However, it's really a nice experience. (F3; F14; M1)
- I know that the class is comfortable, but it seems that I still need more time to overcome my speaking anxiety. Well, anyway, I can speak up my opinions better than before. (F19; F25)

Both female students and male students liked feeling respected. Male students reflected that they had never had a chance to listen to female voices. They enjoyed sharing their feelings with female students, and it was nice to have female voices in class.

- This English class provides me with many chances to listen to female students talking patiently and attentively. I really enjoy their opinions and it is nice to hear female voice in this class, for it offers me a chance to understand female students. (M2; M6; M10; M8; M21; M25; M27; M28)
- I learn quite a lot in this English class; it is more open and comfortable. I have a lot of interactions with the teacher and with my peers. I do not fall asleep as often as before. (F1; F3; F8; F13; F16; M3; M14; M16; M21; M22)

Female students, who had often been neglected by teachers, felt that they were appreciated in this poststructural feminist classroom.

- Before I was too shy to speak English. I thought teachers didn't care much about female students' opinions. Now it is nice to have my opinions heard and appreciated. In this English class, speaking English and speaking up have become less difficult to me. (F2; F6; F9; F16; F25; F20)
- I was too shy to speak English, not to mention speaking in public. But now, with the teacher's support, I can speak up in class without being afraid of being criticized or ridiculed, though sometimes I experience some speaking anxiety in class. (F2; F4; F9; F16; F23)
- Before, I usually sat silently in the class and listened to others' discussion. I tried very hard to take part in the class but it was useless. However, in this class, I was initially afraid of speaking up. After learning that this English class is a pleasant and unthreatening learning environment, I feel quite comfortable expressing my opinions. Now I enjoy sharing my opinions in class. (F4; F5; F8; F14; F19; F22; F24)

Participants in the poststructural feminist English classroom felt that their learning anxiety for English language had greatly reduced. In such a supportive atmosphere, they felt secure, less afraid to talk, and more devoted to classroom activities.

- I feel that in this English class, I am not so scared to speak English. I am not as nervous as before while speaking in public. (F6; F8; F19; F22; M6; M11; M12; M21)
- Now, with the teacher's guidance, support, and encouragement, I have less pressure to share my opinions with my classmates. (F9; F18; F20; F23; M2; M29)
- It is a nice experience to take part in this English class. I really enjoy exchanging my opinions with my peers. (F3; F5; F13; M10; M15; M19; M28)

The atmosphere in the class improved, and class instruction became livelier, more interesting, and inspiring.

- I am afraid to lose face in public; therefore, I am afraid to speak, especially in English class. However, with the teacher's support, I feel less pressure and anxiety when I discuss with my peers. (F8; F18; F21; M3;M8; M12; M16)
- The class climate has become more energetic than before. I like sharing my experience with my classmates and the teacher. (F7; F9; M2; M17; M19; M21)
- I enjoy coming to class. The teacher always knows our needs and gives us timely feedback. We like being treated equally and fairly by the teacher and the other students. It is nice to have my voice heard. (F2; F7; F16; M3; M6; M16)
- Initially, in the class discussion, we kept silent; after becoming familiar with each other, we began to speak and express our opinions freely. (F1; F8; F25; M3; M17; M24)

Based on the above interview excerpts and the *t*-test results of the English learning achievement tests, critical thinking ability tests, and student satisfaction questionnaire, it is shown that the poststructural feminist pedagogy can bring positive effects on the VTE college students. After going through the poststructural feminist instruction, the students in the experimental group showed significantly better English learning achievement, critical thinking ability and student satisfaction than those in the control group.

Discussion

Aiming to transforming negative effects of power imbalances within the patriarchal classroom into positive ones, the study developed a poststructural feminist English classroom and investigated whether this classroom had the potential to increase VTE college students' English learning achievement and critical thinking ability, along with their overall satisfaction with their class. With the application of the poststructural feminist pedagogical model, the results of this study show that the students in the experimental group achieve better learning outcomes. The findings of the data analysis are described as follows:

1. The research results show that VTE college students, especially female students, who underwent the poststructural feminist instruction exhibited better learning achievement than those under the traditional lecturing instruction in the areas of listening, vocabulary, grammar, and reading. The results correspond with the previous research in that when students are empowered to find their own voices and when the material they are studying is relevant and connected to their lives, they can get involved in shaping the content of what is to be learned (Crabtree and Sapp 2003; Epstein 1995; Ropers-Huilman 2003). Unlike a traditional banking class, in which with only single authoritative voices, the pedagogies are used as a tool for the reproduction of the existing professional hierarchy and societal power systems (Freire 1970; hooks 1989;

Maher and Tetreault 1994), the study reveals that with the promotion of "double-voiced" or "multiple-voiced" discourses, in which both the teacher and students would not strictly adhere to their own viewpoints but instead perceive different stances and different voices, students can hence get into to the knowledge construction and shape the content of what is to be learned. Students' active involvement in learning process becomes a way to take control over their learning process and evaluation of how successful they have been in achieving their learning objectives. Being involved and empowered in their English-learning process, the VTE college students under study can actively measure their listening, vocabulary, grammar, and reading competency to a subject of language. Moreover, as Bachman and Palmer (2000) say, being empowered, they can monitor and understand their progress, finding out their strengths and weaknesses in order to work out ways of using the results of the assessment as a basis for future learning process. It is no wonder that the VTE students' learning achievement can be enhanced.

2. The research results show that VTE college students, especially female students, who received the poststructural feminist instruction demonstrated better critical thinking ability than those who received the traditional lecturing instruction in the areas of length, focus, content, organization, and style. Because the teacher in the class promotes multiple authorities, insisting that not only the teacher but also the students voice their opinions and comments to build up the "truth" or knowledge. Hence, the class allows different dynamics and different voices to speak out in the classroom. Believing that they can get involved in shaping the content of what is to be learned, the students dared to explore relevant issues and to speak up as much as they can, without worrying too much about their "face" problem while expressing their opinions in class (Bond and Hwang 1987). Consequently, the students in the experimental group can generate a higher level of critical thinking, by using their own methods and forms of organization. The research results correspond with the previous research (Crabtree and Sapp 2003; Criswell and Criswell 2004; Tuckman 1991) illustrating that when students are empowered, they can show their capacity to organize, synthesize and express knowledge. As Walstad and Becker say (1994) that when being situated in a class in which students can freely express their own idea, demonstrating the interrelationship among these ideas, students are offered the chance to generate responses having the potential to show their originality and to lead a greater understanding of the topic.
3. The research results show that VTE college students, especially female students, going through the poststructural feminist instruction attain a greater level of satisfaction from their class, in terms of the instructional objective, instructional material/method, teacher's qualities, class climate/environment, and assessment. When students' expectations are misunderstood by the teacher, the college classroom suffers from discrepancies in the learning goals of the teacher and students. However, in the poststructural feminist English class under study, in which egalitarianism, democracy, dialogue, and empowerment are promoted, these discrepancies between the teacher and students can be minimized. Through face-to-face and verbal dialogical interaction, both the teacher and students learn to respectfully listen to and interact with others. Also, when students express their viewpoints, they empower themselves with a certain freedom to engage dialogically with one another and to get involved in shaping the content of what is to be learned. Therefore the students in the experimental group had greater student satisfaction. As Freire (1970) and Crabtree and Sapp (2003) manifest that the dialogical interaction becomes a way of sharing power and opening communication between instructors and students in the poststructural feminist class, in

which teacher-student relationship is much more like a democratic co-learning relationship (Crabtree and Sapp 2003; Freire 1970).

However, for male student satisfaction, the results in instructional objective, instructional material/method, teacher's qualities, and assessment were not significantly different. Compared to female students in Taiwan, who have been trained not to talk too much or speak up for their opinions, male students have received more teachers' attention and more interaction with teachers, especially in regard to intellectual interactions (Bailey 1993; Sadker et al. 1984; Wong 1978). In traditional Chinese gender hierarchy, females are subordinated to males. Hence, in hierarchical Chinese society, compared to female students, male students in Taiwan have been given more voice to defend their opinions in traditional classes (Zhuang 1997). Consequently, even though the poststructural feminist class benefits them, these research results do not reach statistical difference. Another possibility for the result might be that because of the smaller sample size—fifteen males—in the control group, which is regarded as an acceptable sample size in experimental design (Borg and Gall 1989; Gay 1992), it is harder to reach a statistical significance due to the relative smaller male sample (Wooldridge 2003). Therefore, these results were not significantly different for male student satisfaction.

Overall, the strength of the poststructural feminist classroom lies in its emphasis on the students' communication and interaction with their classmates as well as the teacher. Attempting to break the hierarchical order with an eye to creating a secured and comfortable learning environment in which instructors and students can cooperate, collaborate, and, through dialogue, struggle to pursue and construct knowledge, the poststructural feminist class calls for these students' empowerment to cross the border and to use language of their own for their liberation (Orner 1992). While being empowered, students feel comfortable with the process of defending their ideas because they know that their ideas and opinions will not be criticized or ridiculed. They can have their way in guiding the direction of the English class discussion and the knowledge construction through dialogue and two-way communication with instructors.

Conclusion and pedagogical implications

The purpose of this study was to develop a poststructural feminist pedagogical model and to investigate whether this model had the potential to positively affect VTE students' English instruction in terms of the English learning achievement, critical thinking ability, and level of satisfaction.

Based on the findings derived from this study, several conclusions can be made. First, generally in the English language achievement post-test, the participants receiving the poststructural feminist pedagogy significantly outperformed those receiving the traditional banking instruction in terms of listening, vocabulary, grammar, and reading. However, it should be noted that though the mean scores for male students in the experimental group were higher than the means scores of the control group in the reading and vocabulary sections, the improvements did not reach statistical significance. Second, in the critical thinking ability post-test, the participants receiving the poststructural feminist pedagogy significantly outperformed those receiving the traditional banking instruction in terms of length, focus, content, organization, and style. Third, in regard to student satisfaction, it was clearly shown that students typically expressed significantly greater satisfaction with

the poststructural feminist pedagogy than did those receiving traditional banking class instruction in terms of instructional objective, teaching method/material, teacher's quality, class environment, and assessment. Nonetheless, for male students, in the instructional objective, instructional material/method, teacher's qualities, and assessment sections, though the male students in the experimental group expressed greater satisfaction than those in the traditional class, these satisfaction results were not significantly different.

In brief, the findings in the study show that the poststructural feminist pedagogy was effective in improving VTE college students' learning achievement and critical thinking ability. Also, under the poststructural feminist instruction, the students expressed greater satisfaction with their class than did those in the traditional class.

Through challenging the authoritarianism of traditional modes of pedagogy, this study aimed to foster an English learning environment, attempting to create a positive learning environment, initiate empowerment and subjectivity, incorporate life experiences into teaching, listen to students' voices, foster dialogical interactions, embrace diversity, and focus on self-reflection. The study intended to provide an alternative for English teachers at VTE institutes to build up a positive English-learning environment to facilitate students' English learning process.

In the traditional Chinese teacher-centered instruction, students are required to sit quietly in rows, passively copying down what the teacher lectures. In this authoritarian atmosphere, teaching and learning are linear and information flows primarily from teachers to students (Rendon 2005). In order to serve as knowledge authority, teachers would deliberately keep a distance from their students, meaning that the teaching-learning relationship is by no means an interactive one. However, under the poststructural feminist instruction, the conventional Chinese teacher–student hierarchical structure has been altered to become a more egalitarian one, encouraging greater student input and involvement.

The study is designed to help VTE teachers in Taiwan, facilitate their English instructional process through the application of the poststructural feminist pedagogy. Aiming to breaking down the traditional hierarchies and boundaries in pedagogic practices, this poststructural feminist pedagogy could decrease the dominant professional patriarchal order among teachers and students. Teachers should remind themselves that in the poststructural feminist classroom, they should give up some aspects of the authority that comes from their position, such as control over discussion and domination of the class. Accordingly, while instructing, teachers should bear in mind that they may consciously or unconsciously lean upon their professional authority. It is required that teachers should always remind themselves to give their students more power over their own English learning process.

Limitations and future research

The study has some limitations. First, students could not be randomly assigned to classes; hence, there is an imbalance of males to females in the control class (42 females to 15 males), compared to the experimental group (which had a more equal balance of 25 females to 29 males). Though the sample size—fifteen males—is regarded as an acceptable sample size in an experimental design (Borg and Gall 1989; Gay 1992), it is harder to reach a statistical significance due to the relative smaller male sample. Hence, the research results may be more generalized for the female class population (Wooldridge 2003). The participants were freshmen of an institute of technology in central Taiwan, majoring in

banking and risk management. Therefore, the results and interpretations should apply to identical learning situations in schools all over Taiwan. Researchers wanting to use the results and findings of the study should carefully examine the background of the study and participant similarity. Future research might apply poststructural feminist pedagogy to a non-ESL reading class, to remediate disadvantaged readers, or to teaching other educational levels, such as junior high school, senior high school, or continuing education.

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