

Measuring the Outcomes of Critical Teacher Education through Concept Maps

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This text summarizes an in-progress study on critical teacher education in the field of Teaching English to Speakers of Other Languages (TESOL). An intervention encouraged novice teachers to engage with the concept that the teaching of English is an ideological act, and it can either subvert or reproduce unequal relations of power in society, depending on the principles and practices that guide it. Much of the intervention was centered on the imperatives to disrupt systems of native speaker (NS) privilege and empower speakers of English as an Additional Language (EAL) while simultaneously validating multilingual practice. I begin by establishing the theoretical framework of the study and then proceed to describe my methodology, which was centered on the comparison of concept maps novices created to illustrate their understandings of Critical Language Teaching (CLT) before and after the intervention. Subsequently, I discuss preliminary findings and their implications. The intervention was successful in prompting broader understandings of CLT, though the component concepts novices associated with it were not necessarily more accurate, with many of the items listed on the maps carrying ambiguous connotations. The text concludes with comments on issues to be resolved as the study moves forward.

1. Criticality: A conceptual definition

The concept of “criticality” (i.e., the actions, dispositions, and modes of analysis one enacts in the course of “being critical”) can be defined in many different ways. The definition at work in the present study departs from traditional conceptions of critical thinking, which are often predicated on the concept of achieving a detached objectivity, and foregrounds the concept of interrogating power relations in the social world. Drawing from domains such as Postcolonialism and Critical Race Theory, I define criticality as the synthesis of *deconstruction* and *advocacy* (see also Nuske 2015 2016). Deconstruction is a primarily intellectual endeavor aimed at unveiling how discriminatory ideologies and practices are naturalized and concealed (Kubota 2011; Lin 2004; Pennycook 1998), while advocacy is a concrete, real-world exertion demanding discernible gestures toward more democratic and inclusive social structures (Curry 2007; De Costa 2010; Park 2012).

2. The relevance of criticality to language teacher education

Careful scrutiny of the spread of English across national and cultural boundaries reveals that the language has been pluralized and diversified into multiple Englishes. Corpus linguistic studies have demonstrated significant degrees of localization (Jenkins 2009; Seidlhoffer 2004), and conversation analysis studies of interactions among speakers of English as a Lingua Franca (ELF) or English as an Additional Language (EAL) evidence the development of multilingual normative communication practices. In other words, these speakers do not necessarily adhere to native speaker conventions of usage or grammatical correctness, but rather codeswitch and negotiate the boundaries of acceptable usage in real time during a particular interaction (Firth & Wagner 2007).

Yet, this apparent reality is obscured by the persistence of native speaker (NS) biases and privileges. Many have argued that the circulation of powerful discourses continues to inculcate the mentality that English is a static entity belonging to native speaking nations and peoples, while native speakers are positioned as the ultimate models and judges of proper use (Kubota & Lin 2006; Nuske 2015). This position has itself been critiqued for positing an overly conspiratorial explanation for the global dominance of English (Atkinson 2010; Brutt-Griffler 2002), but even a cursory examination of the frequency with which English teacher job postings in various milieus stipulate that only native English speaking candidates will be considered reveals that allegations of systemic NS biases are not easily dismissed.

These biases are a serious problem because they result in the marginalization of teachers who are speakers of English as an Additional Language. Despite possessing unique forms of expertise that are perhaps more valuable than what a NS instructor can bring to the table – e.g., firsthand knowledge of learning English as a second language, fluency in students’ mother tongue, and the ability to anticipate common areas of difficulty – these teachers often face systematic barriers on the job market. More broadly, EAL teachers and students alike are placed in a position of perpetual inferiority relative to the native speaker ideal.

Critical teacher education (CTE) seeks to name, confront, and ultimately overcome these entrenched hegemonies by facilitating the growth of novice teachers into more informed and empowered practitioners. It bears mentioning that, while CTE is intended to supplement rather than wholly replace traditional paradigms of teacher education, it encourages apprentices to negotiate with authoritative knowledge claims rather than act as passive recipients of externally derived knowledge.

Given the native / non-native dichotomy that has pervaded the language teaching field, the process of CTE is likely to be different for EAL and native speaker practitioners. For the former group, CTE commonly involves casting off subjugating mentalities and becoming advocates for themselves as legitimate and capable practitioners. In some cases, EAL speakers are harshest when appraising their own English varieties or the linguistic behaviors of those who share their cultural backgrounds (Nuske in press). Thus, some novice practitioners will need to confront self-deprecatory attitudes in the course of their critical reconsiderations of previous assumptions. Conversely, native speakers are obliged to acknowledge and confront their own privilege while becoming informed and committed allies to EAL users. A crucial imperative for novice teachers in both groups is to act as advocates for their students by customizing pedagogies to suit their needs.

3. Potential challenges

Of course, an endeavor like critical teacher education entails a high possibility of resistance because it involves asking individuals to reappraise some of their most fundamental beliefs about themselves and the society in which they live. Teacher education research has often observed that the *apprenticeship of observation* carries a considerable power to diminish or negate new understandings proposed during formal training (Lortie 1975; see also Borg 2006). This term refers to the body of implicit and possibly subconscious assumptions that people make about teaching and learning on the basis of personal experience.

Another risk is that the inherently lopsided power dynamics of the classroom will prompt students to simply mimic the instructor’s critical stances in order to obtain some external reward, such as good grades or praise. As such, great care is needed to encourage novice teachers to embrace and enact critical ideas on their own terms instead of engaging in superficial “ventriloquation of Western discourses” (Ilieva 2010, 363). Such complexities indicate the need for nuanced and varied measurement of critical teacher education outcomes.

4. The present study: Objectives, research site, participants, and methodology

The primary objective of the present study is to utilize concept maps – graphical representations of how individuals understand a given notion’s components and their methods of interrelation (Borg 2006) – to investigate outcomes of a critical intervention conducted in a graduate level TESOL course. Concept maps are well suited to this investigation because they clearly depict the number of subcomponents involved in novices’ conceptions and how various notions are connected or distinct. Therefore, comparisons of maps created for the same concept at different points in time enable direct, quantitative representations of how individuals’ perceptions change (Farrell 2008). The intervention in question placed considerable emphasis on critical concepts such as empowerment of multilingual practitioners and validation of localized Englishes, as these are among the most commonly discussed notions in contemporary scholarly literature. Hence, the specific research questions guiding my efforts to gauge the effectiveness of the intervention were:

1. What concepts do novice teachers associate with “critical language teaching” before and after the intervention?
2. To what extent do these concepts align with critical ideas emphasized during the course?

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The research site was a mid-sized university in the northeastern United States. Its two-year Master of Arts program in Teaching English to Speakers of Other Languages (TESOL) annually enrolls a cohort of International and American students. As opposed to programs adopting a domestic focus, this program carries a primarily multicultural and transnational emphasis. The participants (n=13) were all members of an incoming cohort. Women (n=11) greatly outnumbered men (n=2). The breakdown of nationalities was as follows: four mainland Chinese, four Americans, three Saudi Arabians, one Indonesian, and one Korean.

A partial list of course readings that the instructor employed to impart key critical concepts and to facilitate discussion appears below in Table 1.

Reading	Critical concepts emphasized
Canagarajah 2006	Need for multilingual normative composition pedagogies
He & Zhang 2010	Perceived unsuitability of localized dialects as objects or mediums of English instruction
Kubota 2004	Challenging reductive and essentializing conceptions of multiculturalism
Kumaravadivelu 2003	Postmethod approaches to language teaching
Lin 2004	Problems in critical consciousness development among language teachers
Park 2012	A practitioner's journey toward embracing her "nonnative" identity
Pennycook 1996	Sociopolitical origins of the belief that plagiarism is transgressive

Table 1. Key course readings

Regarding methodology, I utilized a triangulation approach encompassing concept mapping tasks, classroom observation, and a longitudinal sequence of semi-structured interviews with each individual cohort member. However, space restrictions for the present text preclude reference to all of the elicited data types, so I will focus on my data collection procedure for concept maps. I asked students to construct concept maps for "critical language teaching" on the first day of the course in which the intervention took place, when it could be expected that their understandings would be tentative or even non-existent. I asked students to construct a second map for the same concept during the twelfth class session, by which point the readings listed in Table 1 had been the subject of much prolonged class discussion. I then conducted a traditional pre-post comparison of the two maps in an attempt to yield a concrete and contextualized measurement of any shifts toward critical understandings that occurred among the participants as a whole.

Following Farrell (2008), I synthesized the individual maps into collective pre and post-intervention maps. The process of data coding and analysis through which this synthesis took place occurred as follows. First, I generated a series of thematic codes for any concept that appeared on at least two maps. As part of this process, I also tabulated the frequencies of each code. I then separated the codes into three categories – *explicitly critical concepts* (those which overtly referenced or built upon critical ideas discussed in class); *neutral concepts* (those which neither demonstrated a clear connection to critical ideas discussed in class nor contradicted or challenged them); and *arguably uncritical concepts* (those which directly contradicted or negated critical ideas discussed in class). Lastly, I employed a process of recursive recoding in order to eliminate redundancies among the codes and achieve data reduction.

5. Preliminary findings and implications

Prior to discussing the content of the group pre- and post-maps, I provide some rudimentary statistics about the number of items appearing on the individual maps below in Table 2.

Statistic	Pre-maps	Post-maps
Lowest number of items	5	10
Highest number of items	20	24
Total number of items	180	234
Average number of items	13.85	18.00

Table 2. Basic statistics concerning the number of items on individual maps

It can be concluded from these figures that the intervention was successful in promoting broader understandings of critical language teaching, as the post-maps contained 54 more items than the pre-maps on the whole and 4.15 more items on average. Nevertheless, a broader understanding is not necessarily tantamount to a more accurate one. I now turn to a thematic analysis of the collective pre- and post-maps in order to examine the extent to which items appearing on the maps aligned with critical notions emphasized in the course. The collective pre-intervention map appears in Figure 1. The eight thematic codes identified are arranged around the central concept of “critical language teaching.” The numbers in parenthesis following each code indicate the number of times the code was tabulated on individual maps. The bulleted lists above each box display a sampling of the individual items that were subsumed into the broader thematic codes. Neutral concepts are listed in plain text, while explicitly critical concepts appear in *italicized text* and arguably uncritical concepts appear in **bold text**.

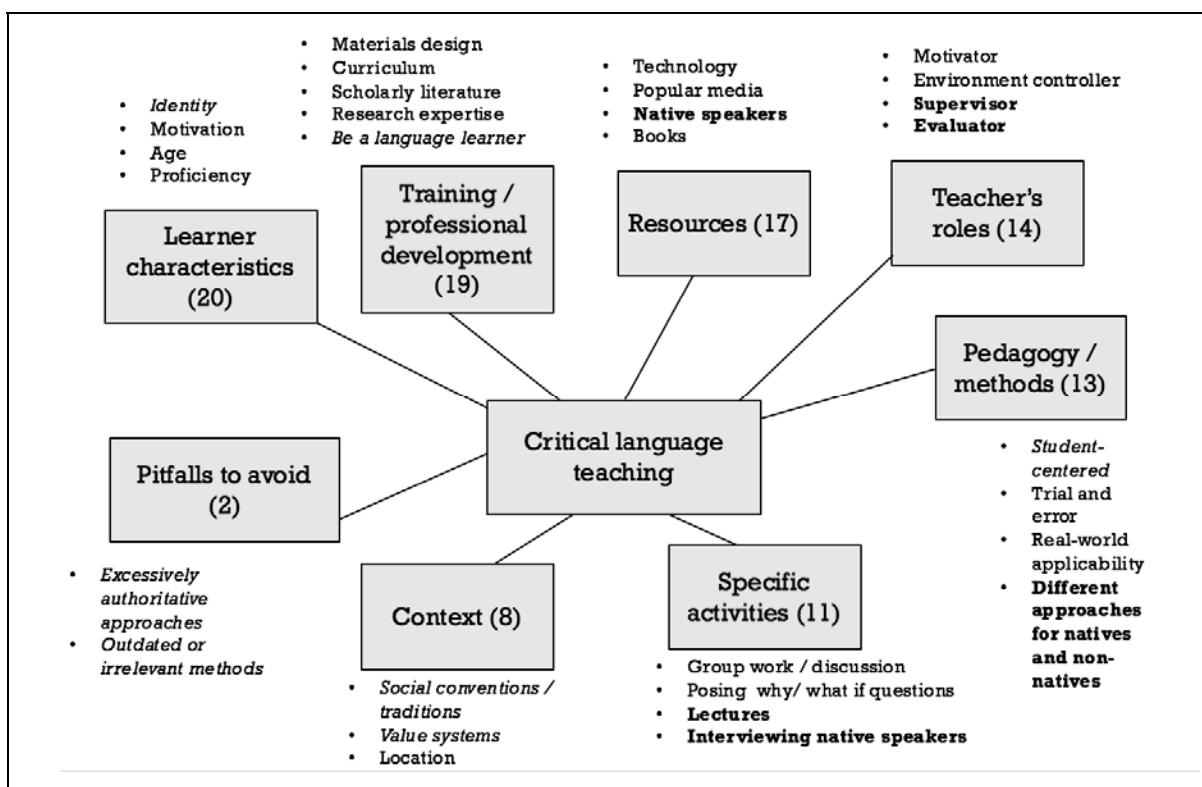


Figure 1. Collective pre-intervention map

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As can be seen, participants conceived that critical language teaching primarily involved taking learner characteristics into consideration, undergoing the proper training or professional development activities, and employing certain resources. Many of the critical concepts invoked were centered on the concept of customization (e.g., considering the students' backgrounds and the social conventions, traditions, and value systems predominant in a given milieu), and some students were able to articulate the concept that a language teacher should be multilingual or actively involved in learning a second language even before the intervention had begun. Most uncritical concepts were centered around native speaker biases (e.g., the notions that natives were invariably the best models for language learners and communication with natives was the optimal form of practicing a language) or the proposition that teachers should or must adopt authoritarian roles. In this collective map, 11 concepts (10.6%) were classified as explicitly critical, 87 (83.7%) as neutral, and 6 (5.7%) as arguably uncritical.

The collective post-intervention map appears in Figure 2. This latter map demonstrates that the number of broader thematic categories increased from eight to nine. Most of the categories from the previous map reappeared, although "Pitfalls to avoid" was replaced with "Difficulties" specific to implementing critical approaches. Another overtly critical new category was "Privilege," but it should be stressed that the individual items subsumed into this code appeared the bare minimum number of times (only twice each) to warrant inclusion on the group map.

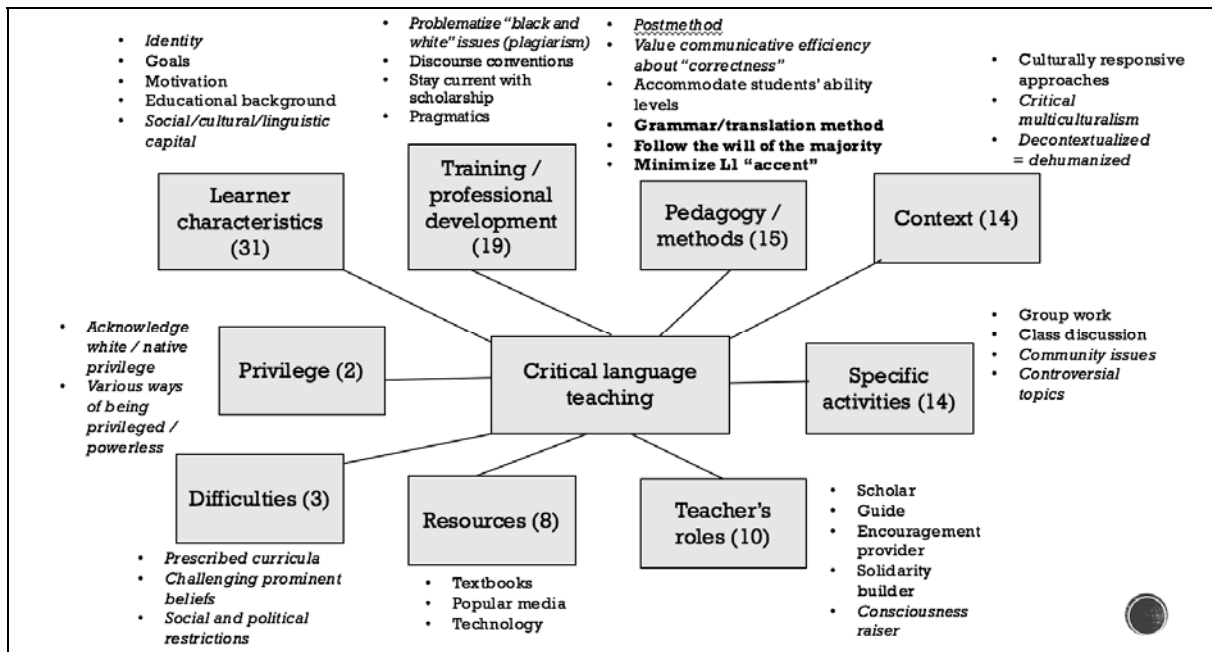


Figure 2: Collective post-intervention map

Comparing the pre- and post-maps, the number of explicitly critical concepts rose to 41 (35.3%) an increase of 24.7%. The incidence of neutral concepts fell to 71 (61.2%), a decrease of 22.5%. Lastly, the occurrence of arguably uncritical concepts fell slightly to 4 (3.5%), a decrease of 2.2%. See table 3 below for a summary of the coding breakdown and relative percentage changes that emerged from the pre-post map comparison.

From these figures, it can be concluded that a collective shift toward more critical understandings did indeed occur, though several caveats come along with this seemingly positive outcome (see section 6, Issues to be resolved, below).

Code classification	Pre-instruction map	Post-instruction map	Relative percentage comparison
Explicitly critical	11/104 (10.6%)	41/116 (35.3%)	+ 24.7%
Neutral	87/104 (83.7%)	71/116 (61.2%)	- 22.7%
Arguably uncritical	6/104 (5.7%)	4/116 (3.5%)	- 2.2%

Table 3. Changes from pre- to post-map comparison.

A closer examination of the specific concepts referenced on the maps reveals numerous trends, each of which is discussed in turn below. First, the number of items subsumed into the “Resources” code diminished from 17 in the pre map to eight in the post, while those in the Pedagogy and Training / Professional Development codes increased from 13 to 15 and 13 to 19, respectively. While caution is warranted when interpreting these shifts because the degree of increase is relatively slight, they may indicate that participants refined their understanding of English teaching, moving away from conceptions of teaching as an instrumental and perfunctory phenomenon that is largely a matter of compiling the proper materials, and toward conceptions of an ongoing rigorous process that draws from multiple knowledge domains.

Second, the category of “Learner characteristics,” which contained the largest number of component codes (20) on the pre-instruction map, has become even more developed in the post-instruction map with 31 codes. Beyond demonstrating a large numerical jump, the latter map contains the items “social/cultural/linguistic capital,” which complicate the narratives of pure meritocracy that are often invoked to explain social disparities and draw attention to the ways in which individuals may enjoy systematic privilege or be faced with systematic marginalization (Bourdieu 1991). As such, the intervention appeared to have been successful in promoting more detailed and critical understandings of concepts students already understood in some depth prior to the start of instruction.

Third, a disconcerting occurrence in need of further consideration is the appearance of several markedly uncritical concepts in the post map. These include endorsements of the grammar-translation method, which is typically considered outmoded and stifling to students’ individual voices, and the imperative to minimize first language accent in second language speech. One factor potentially underlying this problem is the extent of cohesion in the program’s overall curriculum. Although the course that served as the research site devoted a significant amount of time to the exploration and discussion of critical ideas, other courses attended by the cohort may have emphasized more traditional paradigms and essentially weakened or cancelled out the effects of the critical intervention described in the present study. However, this information emerged from other data sources, which raises a potentially serious limitation of research using only concept mapping data (see further discussion in the section below). If such contradictions were in fact discovered through future research, it would speak to a need for students to reflect on points of convergence and divergence among notions arising in their coursework as a whole.

6. Issues to be resolved

As work on the study continues, most of the issues in need of attention revolve around limitations to what can be argued or concluded on the basis of concept maps alone. Criticality is held to be an inherently contextual phenomenon (Pennycook 2001), and concept maps involve an element of abstraction that can obscure the reasons movement toward more critical understandings did or did not occur. Indeed, in working with this overall dataset, I have found that interview data and, to a lesser extent, classroom observation data actually yields the most precisely nuanced and contextualized information about why shifts in individual understanding did or did not occur (Nuske 2015, 2016, in press). Thus, concept map data may inevitably need to be accompanied by reference to other elicited data types even when an elicitation of *collective* shifts in understanding is being attempted. Furthermore, when synthesizing individual maps into collective maps, there is a danger that substantial critical gains among a few individuals can distort the overall pre-post comparison. More nuanced levels of analysis will need to be employed or developed in order to rectify this limitation.

On another, more immediate and obvious level, the thematic codes into which individual map items were subsumed have not yet been subjected to an interrater reliability test. This step will need to be undertaken before more precise and definite findings can be convincingly articulated. Further reference to contextual elements will also be necessary to explain why certain map items were coded as explicitly critical, neutral, or arguably uncritical. In conclusion, I wish to thank those who attended the presentation on which the present text is based. Their astute feedback was invaluable in determining an agenda for the improvement of the study.

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