

# Taking Transformative Action at the Advanced Level (tTAL): A Pedagogical Model for Preparing Graduate-Level Candidates to Address Cultural and Linguistic Diversity in Schools

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The growing cultural and linguistic diversity found in P-12 public schools requires focused attention from advanced-level educator preparation program providers. Practicing teachers earning an advanced degree at the specialist or master's level benefit from theory and research to support diverse learners, but praxis—where theory and research informs practice—is preferred to promote action that improves teaching and learning in real, transformative ways. In this paper, I introduce the *Taking Transformative Action at the Advanced Level (tTAL)* model as an evidence-based pedagogical approach for preparing graduate-level practitioners to meet the needs of diverse learners. I describe underlying theoretical and methodological frameworks relevant to the *tTAL* model and offer recommendations to teacher educators.

Culturally and linguistically diverse learners represent about half of all P-12 public school students in the country (McFarland, et. al., 2017). By 2026, students with diverse cultural and linguistic backgrounds are projected to rise to a 55% majority in public schools (p. 102). Teachers and teacher leaders' shoulder much of the pressure to ensure that diverse learners succeed in schools, and they need greater support from teacher educators to do so. Many researchers note the negative effects of high-stakes testing practices on diverse learners (Au, 2013; Darling-Hammond, 2007; Guerra & Wubbena, 2017; Vasquez Heilig & Darling-Hammond, 2008; Thomas & Allen, 2012), the persistent gaps in achievement despite decades of reform (Blackford & Khojasteh, 2013; Ladson-Billings, 2006; Madrid, 2011), and an urgency for innovative strategies to support learning outcomes for culturally and linguistically diverse students (Bullock, et. al., 2014; Islam, & Park, 2015). Repeatedly, the solution offered for better addressing the needs of diverse P-12 learners is better teacher preparation.

As a teacher educator, I agree that high-quality teacher preparation is essential to improve learning

outcomes for diverse students, but this will require teacher educators to reevaluate our own pedagogical methods for training in-service teachers enrolled in teacher education programs. Copious research examines how best to prepare pre-service teacher candidates for teaching diverse learners, and entire sub-fields of research literature target specific cultural and linguistic groups (Dong, 2004; Dong, 2016; Honigsfeld & Cohan, 2012; Hsiao, 2015; Mensah, 2011; Siwatu et al., 2011; Téllez, 2005). This research has had some effect on reforming pre-service teacher education programs, most notably with changes to the structure and substance of clinical placements to include more experiences in culturally and linguistically diverse school settings (Alfano et. al., 2017). Less attention has been given to pedagogical practices in advanced-level teacher education programs and the training of graduate-level practitioners to better support diverse P-12 learners (Hite, et. al., 2009). What pedagogical approaches should we adopt to prepare in-service teachers and teacher leaders enrolled in advanced-level programs?

In this paper, I introduce the *Taking Transformative Action at the Advanced Level (tTAL)* model as an evidence-based pedagogical approach for preparing graduate-level practitioners to meet the needs of diverse learners. I developed the *tTAL* model in response to my own graduate-level candidates' desire for stronger linkages between their advanced coursework and the real challenges they faced while working with large populations of culturally and linguistically diverse students.

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Note: This manuscript was accepted for publication by the prior editorial team and review board.

As a member of the graduate faculty in the teacher education department at a historically black college and university (HBCU), my role is to provide graduate-level candidates a deeper understanding of diversity in schools through theory, research, and clinical practice. My HBCU was founded as a teacher-training institution, and its continuing mission to serve culturally and linguistically diverse students deems my role significant to the advancement of best practices to support diversity in P-12 schools (Irvine & Fenwick, 2011). The *tTal* model is offered as a pedagogical approach for graduate-level teacher preparation programs to develop candidates' specialized knowledge and research skills to effectively teach students with diverse cultural and linguistic backgrounds. In this paper, I describe the *tTal* pedagogical model, discuss underlying conceptual and methodological frameworks relevant to the model, and offer recommendations to teacher educators.

### **Pedagogical Practices in Advanced-Level Programs**

Advanced-level programs are educator preparation programs at the post-baccalaureate or graduate levels leading to licensure, certification, or endorsement (Council for the Accreditation of Educator Preparation [CAEP], 2017). They are designed to develop teachers, administrators, and other school personnel who have already completed an initial preparation program for employment in P-12 schools and districts. Although the pedagogical practices of teacher educators in graduate-level programs is an under-researched field, they can be summarized into two schools of thought: the scholar-teacher model and the reflective-practitioner model. The scholar-teacher model follows a humanist tradition of graduate degree programs that promotes advanced study of professional content knowledge and skills (Loughland & Bowen, 2012). As scholar-teachers, graduate-level candidates "are expected to learn the field of education in the academy so that they may apply this 'disciplined knowledge' to the classroom" (p. 348). Teaching methods reflect conventional styles of teaching through lecture, research, and scholarly writing. Pedagogical practices are considered no different from other academic disciplines in graduate degree programs (Darling-Hammond et al., 2009). By contrast, the reflective-practitioner model gained momentum in the late 20<sup>th</sup> century as various national and state agencies focused professional standards on developing teaching candidates for student and school improvement (Galluzzo et al., 2012). This model distinguishes graduate study in teacher education from other academic disciplines. A master's level program is intended

to strengthen teachers' skills as reflective practitioners, deepen their content knowledge, and develop skills as classroom-based agents of change (Galluzzo et al., 2012). Pedagogical practices include a range of strategies, including cooperative learning, peer teaching, and reflective writing. There is an emphasis on preparing teachers to collect and interpret data to better understand their students and improve their classroom practice. High-quality reflective-practitioner programs integrate field-based or clinical components within coursework to strengthen the link between theory and practice (Darling-Hammond et al., 2009).

The Council for the Accreditation of Educator Preparation (CAEP) requires both initial and advanced-level programs to consider diversity as they design courses and clinical experiences, but advanced-level programs should also prepare candidates to integrate data analysis and application of research methodologies (CAEP, 2017). To prepare graduate-level candidates for teaching diverse learners, some programs rely on structured mentoring and coordinated school placements (Brown et al., 1999; View & Frederick, 2011). Other programs suggest a social justice approach that requires graduate-level candidates to strengthen their skills in curriculum development and lesson planning. Bartell (2013) and Cohan & Honigsfeld (2006) adapted the Japanese strategy *lesson study* to train graduate-level candidates to work collaboratively to design lessons aimed at improving learning outcomes for diverse students. Lesson study requires teachers to plan, implement, and refine lessons using detailed observation and critical reflection (Fernandez & Yoshida, 2000). Bartell (2013) focused the lesson study strategy on social justice goals in the teaching of mathematics and found it successful at improving the quality of teaching among graduate-level candidates. Cohan & Honigsfeld (2006) examined both graduate and undergraduate candidates in their lesson study investigation, finding that graduate-level candidates were effective in research and written analysis but "encountered most difficulties in connecting the project to the needs of culturally diverse students in an inclusive classroom and developing an action plan for the real classroom" (p. 85). The authors found graduate-level candidates lacked the ability to transfer their research and analytical knowledge into effective practices for diverse learners in real school environments. Lesson study and other clinical-based pedagogical approaches offer promise to teacher educators at the advanced level but also underscore the need for pedagogy that results in transformative action to improve teaching and learning for a diverse population of students. In many cases, teacher

educators are ill-prepared to model effective practices for teaching diverse P-12 learners (Darling-Hammond et al., 2009; Hite, et. al., 2009; Galluzo et al., 2012). We tend to rely on content specialization and traditional methods of academic teaching that complicate our special role as teacher education faculty (Hite, et. al., 2009). We must maintain traditional faculty roles in teaching, research, and service, but bear an added responsibility for being teaching role models for P-12 educators (p. 84). The challenge we face is developing advanced content knowledge and research skills in adults, while also demonstrating best practices for teaching P-12 learners in schools. The *tTal* approach offers a framework for reconciling both aims for teacher educators in graduate-level programs.

### ***Taking Transformative Action at the Advanced Level (tTAL) Model***

The *Taking Transformative Action at the Advanced Level (tTAL)* model is a pedagogical approach designed for graduate-level programs to better prepare advanced candidates for meeting the needs of culturally and linguistically diverse learners in P-12 schools. Unlike differentiated instruction (Tomlinson & Imbeau, 2010), the *tTAL* approach trains teacher-researchers to engage in culturally-responsive action research to produce evidence-based results of culturally-responsive classroom interventions and disseminate research findings to school leaders in effort to transform wider practice. The *tTal* model harnesses a rich legacy of cultural diversity found at HBCUs by fusing elements of social activism, culturally-responsive teaching, and empirical research. It is intended to enhance graduate-level candidates' capacity to apply specialized knowledge and research methodologies gained in advanced coursework. The *tTal* pedagogical model has four stages: Grow, Research, Act, and Disseminate.

#### **Grow**

Education faculty should grow candidates' knowledge base through a review of research literature. They must first develop candidates' understanding on the nature of culture, establish clear differences between and culture and stereotypes, and explain how culture overlaps in society and schools. Candidates should study various frameworks for conceptualizing culture (Hofstede, 1997; Wren, 2012) and explore their own cultural self-awareness through critical reflection of self and society. Self-awareness and identification of

one's own cultural identity is the first step toward intercultural understanding (Rader, 2015). This can be difficult for some candidates due to our society's tendency to conflate culture and race, and delving into the many cultural layers that comprise each individual (national, regional, ethnic, religious, gender) helps to clarify understanding at the advanced level. After exploring their own cultural identities, candidates should examine cultural differences and identity development from the perspective of various cultural groups (Gullan et al., 2011; Kim, 2011; Morgan, 2009); reflect on intercultural experiences, and confront stereotypes through open dialogue. With a deeper understanding of culture, candidates are now able to examine culturally-responsive teaching (Gay, 2010; 2013) and its research applications in real P-12 schools (Bui & Fagan, 2013; Colbert, 2010; McIntyre & Hulan, 2013; Sleeter & Cornbreth, 2011; Ware, 2006). Candidates should learn culturally responsive teaching theory and practices, observe P-12 classroom implementation in video or clinical settings, and have opportunities to demonstrate culturally responsive practices through peer teaching in class sessions.

#### **Research**

After growing candidates' knowledge of culture and culturally responsive teaching, instructors should guide them towards building a *Cultural Context for Learning*. A *Cultural Context for Learning* includes a) information about the advanced candidates' role in schools, b) demographic data identifying the cultural and linguistic diversity found in candidates' classroom or school environments, c) analysis of existing practices to support diverse learners, and d) research-based culturally-responsive strategies that align to candidates' specific classroom context. Advanced-level candidates should begin their *Cultural Context for Learning* by identifying their role in schools (teacher, teacher leader, or other school professional) and describing their responsibilities in the teaching and learning of diverse students. They should discuss P-12 demographic data obtained from archival records such as school enrollment reports and use culturally responsive strategies to encourage P-12 students to share their own cultural identities. Eisazadeh & Stooke (2013) found the "All About Me" flipbook to be an effective activity for encouraging younger learners to share stories about their family's history, traditions, and cultural values. At the secondary level, writing autobiographies can be effective for helping older students to understand culture and

explore their own cultural identities (Payne & Laughter, 2013). Candidates' analysis of existing practices should include strategies employed at the classroom or school level to specifically meet the needs of diverse learners, not overall initiatives to support school improvement. For example, a schoolwide initiative for Response to Intervention (RTI) may not have been implemented to directly target learning outcomes for African-Americans, but a reading program featuring stories with African-American heroines may be considered a culturally-responsive practice (Payne & Laughter, 2013). Finally, candidates' *Cultural Context for Learning* should include research strands within the field of culturally responsive teaching that align to their specific classroom contexts. Because research literature on culturally responsive strategies for diverse learners is so expansive, this stage focuses the advanced candidate on gaining specialized knowledge pertinent to their own cultural contexts for learning. An advanced candidate who teaches reading to elementary school students representing African-American and White cultural backgrounds would gather research to build specialized knowledge in culturally-responsive practices for this specific context, whereas another candidate may build her specialized knowledge in culturally-responsive math strategies for English-language learners, Latinos, and African-Americans. In this way, advanced coursework becomes intentional and applicable to candidates' daily classroom routines, supports specialized knowledge of culturally responsive teaching, and lays a foundation for engaging in culturally responsive action research. In the previous stage (Grow), candidates gained only a broad understanding of culturally responsive teaching theory, practices, and research applications. This stage requires them to gather internal research data on diverse learners and existing practices in their own classrooms, then gather external research to build specialized knowledge that target their specific grade level, content area, and cultural and linguistically diverse populations.

## Act

After building general and specialized knowledge of culturally responsive teaching, education faculty assist candidates in completing a small-scale, culturally responsive action research project. Various interpretations of the action research process exist (Marquadt, 1994; Eden & Huxham, 1996; Mills, 2014), but the *tTal* approach draws upon Mills' (2014) methodological framework for practical action research. In practical action research, the teacher-researcher is autonomous and

focused on defined objectives for classroom intervention. The overall goal is professional development to improve practices within the classroom and eventually, the school. Mills (2014) details the action research process in four non-linear steps that interact in a dialectic action research spiral:

1. Identify an area of focus.
2. Collect data.
3. Analyze and interpret data.
4. Develop an action plan.

This action research process supports pragmatic research applications in semester-long graduate-level courses and simplifies action research methodology for novice researchers. Graduate-level candidates should reflect on their *Cultural Context for Learning* and the specific needs of a target population to identify an area of focus for classroom intervention. The research focus may target quantitative learning outcomes such as reading levels, or qualitative patterns of behavior, such as student engagement. However, the research focus must be narrowly defined to reflect a specific culturally responsive strategy and a specific diverse learner population. For example, in her *Cultural Context for Learning* a candidate may have found music integration to be an effective strategy for reducing disciplinary problems among African Americans at the elementary level. She decides to focus her classroom intervention on music integration to investigate its effectiveness in decreasing the number of disciplinary referrals for her African American students in an academic quarter. Her investigation would then compare the number of disciplinary referrals in the academic quarters pre- and post-intervention. Given this example, education faculty should guide candidates towards a research focus that is practical, meaningful, and narrowly defined.

After identifying an area of focus, candidates should identify evaluation criteria and procedures for data collection and analysis. Evaluation criteria, data collection, and data analysis are largely determined by the nature of the research focus and can be drawn from quantitative, qualitative, or mixed methods research designs. Strong consideration should be given to the accessibility of data, locus of control, and time needed to collect certain data sources, such as interviews or state assessments (Mills, 2014). It is more efficient to identify evaluation criteria where results can be obtained on a quarterly or weekly basis; it is more practical to include data sources such as class-based tests, attendance records, and field notes. After identifying evaluation criteria and collecting and analyzing baseline data, candidates should develop an *Action Plan* to implement their culturally responsive intervention strategy during a period

of 4-to-6 weeks. The *Action Plan* includes procedures for implementation and sources for data collection. Candidates should develop procedures that integrate with their daily routines and identify benchmarks for data collection. Education faculty can provide individual support to candidates by creating structured opportunities for reflection and analysis to determine if adjustments are necessary. Candidates should develop a *Culturally Responsive Action Research Report* at the conclusion of the implementation period to analyze the effect of the culturally responsive intervention on practices and participants. The *Report* details research findings, challenges to implementation, and recommendations for continued action by.

### Dissemination

The dissemination of research findings is a core component of graduate-level study and critical to the *tTal* model's goal to transform school practice. After data analysis, candidates should produce evidence of their culturally responsive intervention as part of a dissemination plan. The dissemination plan includes the *Culturally Responsive Action Research Report*, archival records and P-12 student work samples illustrating the impact on student learning, and descriptive statistics to illustrate research findings. It should also identify challenges with implementation and possible remedies to improve the effectiveness of the strategy. Finally, the dissemination plan includes recommendations for department or school-wide practice and outlets for dissemination. Outlets may include school department meetings, staff professional development retreats, and graduate research conferences at the university level.

### Conceptual Framework

I designed the *tTal* pedagogical model within a conceptual framework of culturally responsive teaching. Gay (2002; 2010) first introduced culturally responsive teaching as “using the cultural knowledge, prior experiences, frames of reference, and performance styles of ethnically diverse students to make learning encounters more relevant to and effective for them” (Gay, 2010, p. 31). Her ideas draw upon Ladson-Billings' (1995) grounded theory of culturally relevant pedagogy that posits an interrelationship between achievement, cultural identity, and socio-political awareness. Ladson-Billings (1995) observed characteristics of culturally relevant teachers to formulate her theoretical perspective, finding that culturally relevant teachers held

unique conceptions of self, their students, social relations, and knowledge about curriculum and assessment (p. 478). Although Ladson-Billings' work developed primarily from studying successful teachers of African American students, her principles for culturally relevant teaching can be universally applied to support all ranges of cultural and linguistic diversity (Bennett, 2011; Gay, 2013). Using culturally relevant pedagogy, students should: a) experience academic success, b) develop and/or maintain cultural competence, and c) develop a socio-political consciousness (Ladson-Billings, 2014). Since its introduction to the field, the term “culturally-relevant” has been synonymously labeled as “culturally appropriate,” “multicultural education,” or “culturally-responsive.” I prefer the term “culturally-responsive” because it prioritizes the cultural knowledge and learning styles of diverse students in classroom practice. Instructional-decision making is *responsive* to students' learning styles and curriculum is organized to *build upon* their existing cultural knowledge. This line of thinking is supported by a constructivist theory of learning that asserts knowledge is constructed from and shaped by experience (Piaget, 1936; Novak & Gowin, 1984; Bada, 2015). Introduced by Piaget (1936), a constructivist orientation posits that individuals form meaning through connections to prior or lived experiences. Knowledge is organized through mental schemas that form the basic building blocks of cognitive behavior. When individuals are confronted with new environments or experiences, the number and complexity of existing mental schemas increase, thereby constructing new meaning (Belanger, 2011). In constructivism, students learn new knowledge by linking it to prior knowledge, and since students' cultural and linguistic backgrounds are inextricably linked to their prior knowledge, effective classroom practices for teaching diverse learners should also be culturally responsive.

Culturally responsive practices are determined by the “socio-cultural characteristics of the settings in which they occur, and the populations for whom they are designed” (Gay, 2013, p. 63). This is a critical understanding of culturally responsive teaching and the *tTal* strategy, and I caution against the idea that *all* best practices can be successfully applied in *all* classroom or school environments. The *tTal* strategy progresses graduate-level candidates' understanding of culturally responsive teaching from general knowledge, to specialized knowledge, to specific culturally responsive strategies to support their unique cultural contexts for learning. It is a culturally responsive model for prepar-

ing graduate-level candidates to use culturally responsive teaching in schools. It develops cultural self-awareness and intercultural understanding as an introduction to examining culturally responsive practices and conducting research-based applications with diverse learners. Researchers have discovered a broad range of culturally-responsive strategies for effectively teaching diverse learners (Dong, 2004; Dong 2016; Honigsfeld & Cohan, 2012; Hsiao, 2015; Mensah, 2011; Siwatu et al., 2011; Téllez, 2005) and the *tTal* approach trains advanced-level candidates to research those strategies that best supports their specific classroom contexts.

Leading scholars in the field of teacher education have long called for teacher preparation programs to promote culturally-responsive teaching in curriculum and methods coursework (Bennett, 2011; Bullock et.al., 2014; Cochran-Smith, 2004; Darling-Hammond, 2007; Darling-Hammond et al., 2007; Irvine & Fenwick, 2011; Ladson-Billings, 2014; Sleeter & Cornbreth, 2011). It is valued as an effective way for preparing graduate-level candidates to better support diverse learners and for decreasing the number of poorly prepared teachers in our nation's neediest schools. However, teacher education has not yet created a strong pipeline of practitioners who can adequately support diverse learners in classrooms and schools (Darling-Hammond, 2007; Ladson-Billings, 2011). One of the main reasons culturally-responsive pedagogy does not play a dominant role in teacher education is that it is often placed in courses that target "diversity" or "multicultural" objectives apart from courses examining general curriculum and instructional development. Although the *tTal* strategy is framed by culturally responsive teaching, it is still consistent with general practices dominating teacher preparation programs, such as differentiated instruction and technological integration. Differentiated instruction is tailored instruction to meet the needs of individual learners (Tomlinson & Imbeau, 2010). It is used to address all forms of learner differences, including culture, language, ability, socio-economic status, readiness, interests, and motivations. Similarly, the *tTal* model requires graduate-level candidates to consider cultural and linguistic diversity as factors for determining the needs of the learner and identifying strategies to improve pedagogical practice. Instruction is differentiated to support learners' needs but is also consistent with the cultural knowledge and/or learning styles of culturally and linguistically diverse students. Technology-enhanced instruction also offers promising evidence for improving student learning and developing high-level communication skills. A

technology area of focus can be integrated in the *tTal* model. The *tTal* strategy would encourage graduate-level candidates to research and implement the best technological practices for supporting their cultural contexts for learning.

### Methodological Framework

The *tTal* approach is grounded in Mills' (2014) methodological framework of practical action research, in which action research is purposed for effecting positive change in the school environment. I prefer action research methodology for graduate-level candidates because it offers a paradigm for developing teacher-researchers to reflect and improve upon their own pedagogical practices. Teacher researchers are trained to investigate a range of classroom concerns, from low student participation to low reading levels, to find personalized and practical solutions. After engaging in systematic inquiry and reflective practice during the research process, teachers become equipped to make transformative changes in their classrooms and ultimately, their schools. Mills (2014) identifies three categories of action research: emancipatory, socially responsive, and practical. The goal of emancipatory action research is to discover knowledge about a particular area of focus without a clearly defined intervention to investigate or test. Socially-responsive action research may include a specific intervention but assembles several participants—teachers, counselors, parents, school leaders—to address large structural problems within the school. Both emancipatory and socially responsive action research can be valuable for improving teaching and learning for diverse learners, but they require extensive planning and active participation from others not enrolled in the graduate-level program. The *tTal* strategy incorporates practical action research because it offers clear and practical guidelines for teacher-researchers and can be modified into a small-scale action research project completed in a semester-long graduate-level course.

Action research is generally summarized as a form of systematic inquiry intended to improve practices in a localized context, but there are various definitions of action research. Hopkins (1985) and Ebbutt (1985) define it as disciplined study to improve or reform practice. Similarly, Corey (1953) describes action research as a process designed for practitioners to systematically evaluate and improve their own professional practices. Some researchers ascribe a social justice function to action research (Carr & Kemmis, 1986; Grundy, 1987),

while others regard it as a form of self-reflective inquiry to improve social or educational practices (Kemmis and McTaggart, 1988). The core features of action research—practitioner-based, systematic inquiry, and self-reflection—undergirds the methodological stance of the *tTal* approach. However, the *tTal* strategy adheres to Cohen & Manion’s (1989) definition of action research as a “small-scale intervention functioning in the real world” with close examination of its effects on practices and participants (p. 186). The *tTal* approach follows the teacher-as-researcher tradition within the domain of action research methodology (Grundy, 1987; Stenhouse, 1975; Cohen et al., 2007) by building graduate-level candidates’ specialized knowledge and research skills to improve professional practices that support diverse learners in real school environments. Its goal is to train teacher-researchers to research, implement, and evaluate best practices that correspond to a specific cultural context for learning. Although many researchers interpret action research as a collaborative inquiry consisting of multiple participants (Kemmis & McTaggart, 1992; Zuber-Skerritt, 1996), I view this interpretation as restrictive. A highly collaborative action research project requires extensive time and effort to recruit active participants, gather feedback, and collect and analyze data. Such a process is impractical for many graduate-level candidates and nearly impossible to organize effectively in a semester-long graduate course. Also, inviting multiple participants such as school officials or other professionals into the action research process can undermine the goal to build candidates’ proficiencies in specialized knowledge and research applications. The *tTal* model situates the culturally responsive intervention within the candidates’ locus of control (Mills, 2014). It urges graduate-level candidates to analyze their specific school contexts and identify an area of focus that is achievable within the parameters of their classroom and school environments. A candidate should ask herself: “What is my role and responsibilities in supporting diverse learners?” “What intervention can be integrated into my daily routines and yield sufficient data for research?” Collaboration should occur between the instructor and the graduate-level candidate to guide decision-making, but the action research process described in the *tTal* model is conceived as an individual endeavor.

Several researchers have codified the action research process into multiple stages that can be adopted in the teacher-as-researcher paradigm (Cohen et al., 2007). They generally build upon Kemmis & McTaggart’s (1992) seminal work identifying action research

as a process to “plan, observe and reflect more carefully, more systematically, and more rigorously than one usually does in everyday life” (p. 10). Mills (2014) informs the *tTal* model because it offers a straight-forward approach to structure an action research project for graduate-level candidates. The four steps (identify an area of focus, collect data, analyze and interpret data, and develop an action plan) are cyclical in nature to support ongoing reflection and adjustment to the culturally-responsive intervention strategy prior to implementation of the action plan. This helps graduate-level candidates to make data-driven decisions as they identify evaluation criteria, adjust the intervention strategy to their specific cultural context for learning, and develop procedures to incorporate within daily routines. Ongoing reflection and adjustment trains them how to overcome challenges that may frustrate and delay the research process outlined within the *Action Plan*. The *tTal* approach encourages candidates to collect a variety of data sources to support triangulation of data, such as archival records, P-12 student work samples, and field notes. Techniques for data collection are largely determined by the nature of the problem, and analysis of research findings should occur considering the previously defined evaluation criteria (Cohen et al., 2007, p. 308). The *Culturally Responsive Action Research Report* offers practical guidance for written evaluation of the culturally responsive intervention and research findings. It is important that research findings are clear and practical to support dissemination to peers and school leaders.

The *tTal* strategy draws upon action research methodology to develop teacher-researchers by framing the methods used for conceptualizing, collecting, and analyzing data. Indeed, action research is a popular domain of research methodology applied in graduate-level teacher education programs (Anwar, 2016; Loughland & Bowen, 2012). It is often incorporated as a stand-alone research course or capstone project within a general methods course. Loughland & Bowen, (2012) found action research to be most successful as a project fully integrated within a course. The *tTal* strategy recommends a small scale action research project, consisting of 4-to-6 weeks, to be most practical for teachers and graduate-level candidate and can be used as a research component within a general methods course or in a stand-alone course. It differs from other adaptations of action research in graduate-level programs because it stresses the integration of a particular intervention (culturally responsive teaching) and target student population (diverse learners). It promotes specialized knowledge for meeting the needs of diverse learners in

real school settings, and for producing evidence to determine the impact on student learning. It promotes practical application of action research methodology to fit special cultural contexts and limitations within the school and classroom environment. In real school environments, a pedagogical approach that helps candidates to directly apply their knowledge and research skills is most effective for creating long-lasting change to improve classroom practice (Somekh, 2005).

**Recommendations for Teacher Educators**

I have outlined the conceptual and methodological frameworks underling the *tTal* pedagogical approach, but there are also practical recommendations for teacher educators to consider:

1. IRB. Before implementing their culturally responsive action research projects, graduate-level practitioners should obtain Institutional Review Board (IRB) approval to conduct research with human subjects. This can be a long and tedious process for graduate-level candidates to complete individually, and my

recommendation is for education faculty to submit a collective IRB proposal describing the culturally-responsive action research project as a clinical component of their advanced-level coursework. This will promote standardized procedures for obtaining informed consent, identifying methods through the *Action Plan*, and presenting evidence in the *Culturally Responsive Action Research Report*. Importantly, it will allow education faculty to collect important evidence on graduate-level candidates’ proficiencies and impact on P-12 student learning.

2. Course Integration. The *tTal* approach can be integrated as a clinical component within a general methods course or as the core pedagogical framework for courses relating to cultural diversity in schools. As the core pedagogical framework in diversity courses, the *tTal* model can be fully integrated into the scope and sequence of a standard 12-week course. As a clinical component in general methods courses, the *tTal* model be partially integrated on a smaller scale (see Table 1.). The following table offers a cognitive map of the *tTal* model to help teacher educators see how ideas are connected and related to practice:

Table 1

*Samples The tTal pedagogical framework*

	<b>Grow</b>	<b>Research</b>	<b>Act</b>	<b>Disseminate</b>
	Grow knowledge base of culturally responsive teaching	Develop specialized knowledge of culturally responsive teaching and diverse learners in the classroom context  <i>Cultural Context for Learning</i>	Conduct culturally responsive action project  <i>Action Plan</i> <i>Culturally Responsive Action Research Report</i>	Make recommendations for continued action and share findings with peers and school leaders  <i>Dissemination Plan</i>
<b>Full course integration</b>	2-3 weeks	2-3 weeks	4-6 weeks	1-2 weeks
<b>Partial course integration</b>	1-2 weeks	2-3 weeks	2-3 weeks	1-2 weeks

Partial integration should focus on developing specialized knowledge and identifying suitable interventions for graduate-level candidates’ specific cultural contexts for learning. Culturally responsive action research projects would generally test the effectiveness of teaching strategies or teaching tools using pre/post testing to target P-12 learners’ knowledge of specific concepts.

3. Area of focus. Education faculty should give special attention to assist graduate-level candidates in framing their area of focus. They should encourage candidates to establish narrowly defined evaluative criteria

and consider their local of control, so interventions fit within their daily classroom routines. This is important for reducing delays and resistance that can frustrate their completion of the project.

4. Process. It is helpful to create standardized templates for guiding candidates through the culturally responsive action research project. These templates may include preferred ways to display the *Action Plan*, *Culturally Responsive Action Research Report*, data collection, and data analysis. Many templates can be adopted



from online repositories for student-led research. For example, I provide a standard poster presentation template for graduate-level students to display their research findings for dissemination. The template includes sections for a summary of the *Action Plan*, pictures and P-12 work samples, descriptive statistics to relay results, and bulleted recommendations for continued action by the graduate-level candidate and by school leaders.

5. Dissemination. Teacher education faculty should create opportunities for graduate-level candidates' dissemination of their research findings. Peer and school-level dissemination is expected in the dissemination plan, but graduate conferences or symposiums at the university level also offer great opportunities for sharing candidates' research findings. For example, I host an Action Research Symposium at the close of semester so that research findings can be highlighted and shared using poster presentations. The symposium provides rich evidence for documenting graduate-level candidates' impact on learning outcomes for diverse students, and it gives candidates a forum for disseminating their research findings.

### Is the *tTal* strategy possible in teacher education?

The pedagogical practices of teacher educators in advanced-level programs deserves greater attention in research literature to support transformative action in schools. Graduate-level programs tend to focus on the development of advanced knowledge and research skills, but to become transformative, teachers' learning "should be developed in ways that derive from and connect to the content and students they teach" (Darling-Hammond, Hammerness, Grossman, Rust, & Shulman, 2005, p. 391). I present the *tTal* model as a strategy for teacher educators who desire new ways for better training graduate-level practitioners to support diverse P-12 learners. Often, those enrolled in an advanced-level teacher education program are veteran teachers or hold positions of leadership as teacher leaders, academic coaches, and curriculum supervisor. They have the strongest potential for transforming classroom practice to improve learning outcomes for culturally and linguistically diverse students. If teacher educators heed seriously the call to better prepare teachers for the content and students they teach, the *tTal* model is entirely possible in concept and method.

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