The CCTE SPAN 2020 Research Monograph

Published by
the California Council on Teacher Education

Containing 14 Research
Articles Originally Accepted
for Presentation at CCTE SPAN 2020

CCTE SPAN 2020 Research Monograph

Published by the California Council on Teacher Education

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Introductions from SPAN Co-Chairs, CCTE Research Committee, and CCTE President

From the SPAN Committee Co-Chairs

In his January 10, 2020, budget presentation, Governor Gavin Newsom outlined bold initiatives for early childhood education, teacher preparation and professional development, K-12 public schooling, and California's public universities. His vision was to be funded by over $900 million in proposed expenditures. Against this hopeful and exciting backdrop, we geared up for the California Council on Teacher Education's Spring 2020 SPAN Conference. We coordinated efforts with our policy allies, getting ready to work together on key legislation. We secured excellent speakers who would bring new perspectives (the media, the law) to our policy discussions. And, under Sarah Johnson's leadership, we looked forward to a slew of visits to legislative offices, including first-ever meetings with actual legislators rather than just staff.

Then as March approached and the increasingly dire news about the global pandemic became a reality for all of us in California, the CCTE leadership and SPAN conference co-chairs made the hasty and difficult, but obviously necessary, decision to cancel the place-based confernce and restructure SPAN into a three hour virtual meeting. This leadership group did what educators do—marshalled all possible resources, thought outside the box, and reframed this challenge into a different kind of teachable moment. And the CCTE community did what educators do—adjusted to the changes gracefully and stoically and engaged the new opportunity with enthusiasm, patience, and understanding.

During that virtual SPAN meeting on the afternoon of March 19, we had a chance to "see" each other, interact around important policy questions, and learn from our remarkable speakers: Louis Freedberg, Executive Director, EdSource; Rigel Massaro, Senior Legislative Counsel, Public Advocates; the Commission on Teacher Credentialing team (Teri Clark, Cheryl Hickey, and Erin Sullivan); and several policy allies—Laura Preston (Association of California School Administrators), Shelly Gupton (California Teachers Association), and Chelsea Kelley (Assembly Education Committee).

Finally, each of the accepted conference researh presenters has also done what educators do—pivoted, viewed a challenge as an opportunity, and accepted the invitation to contribute to our collective knowledge through this *CCTE SPAN 2020 Research Monograph*. This volume provides us yet one more chance to extend our SPAN 2020 learning even more broadly.

Thank you to the CCTE community and the many people who contributed to making all parts of SPAN 2020 possible. We'd like to pay special attention to the technical support provided by Nicol Howard, Ernest Black, and Betina Hsieh that assured us a smooth and professional virtual SPAN event as well as the yeoman's work that Alan Jones has done trying to pick up the logistical and financial pieces during this difficult time.

Please receive and retain this PDF publication. Enjoy all of the contributions from our SPAN 2020 research presenters…and promote their work widely!

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Nicol Howard, University of Redlands
Pia Wong, California State University, Sacramento
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From the CCTE Research Committee Chair

The research presentations for the 2020 SPAN Conference promised to be invigorating! With the cancelation of the conference, CCTE members and conference attendees missed out on hearing in a face-to-face setting about the valuable and informative research that was to be presented. It is with great enthusiasm that I thank the accepted authors of the research presentations for their additional efforts at writing and editing the enclosed manuscripts. This monograph provides a platform for the accepted research authors to share their findings and their conclusions and recommendations with our CCTE members and friends.

Many thanks go out to the members of the Research Committee! To our valued reviewers, thank you for taking the time to participate in the blind review of the proposals and for offering your reviews. To Alan Jones for his counsel about the best format and structure of the research presentations, a warm thank you! To the conference organizers, thank you for welcoming the research presentations. We

are looking forward to future SPAN conferences and the rich and diverse research presentations that always accompany each conference!

Cynthia Geary, Chair, CCTE Research Committee
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From CCTE President Eric Engdahl

The 2020 California Council on Teacher Education SPAN conference was remarkable, but not because it was scheduled to took place at the beginning of the COVID-19 crisis that has profoundly changed daily life. Rather, it was remarkable due to the response of the Policy Committee and the leadership of CCTE who, in breakneck speed, put together a virtual conference that exceeded expectations not just for the quality of material presented but also because of the timeliness of the online sessions and the level of virtual participation by our CCTE community.

However, the one component left out of the virtual conference was the anticpated concurrent research roundtables and poster presentations. In the years I have been attending CCTE conferences the research presentations have always been important to me. They have provided a venue for me to share my work, I have learned much from the presentations by others, and I am consistently impressed by the quality of the research and scholarship of colleagues across the state. By publishing this monograph, we are providing an opportunity for our colleagues to make up for the "lost sessions" at the 2020 SPAN Conference and share their research.

In looking through the research presented herein, I find it to be relevant and timely. When I receive a professional journal I always read in the order of what seems most pertinent to me. In reviewing the articles included here they all seem germane. You will find entries addressing Video Mentoring (Allison Smith, Melissa Meetze-Hall, Keith Walters, & Brian Arnold), Professional Growth Among Mentor Teachers (Katya Karathanos-Aguilar & Lara Ervin-Kassab), and Countering Deficit Thinking about Neurodiversity (Grinell Smith & Colette Rabin). I was particularly interested in Derek Riddle and Kimy Liu's discussion of Teacher Recruitment. These are just four examples from the fourteen articles in the monograph. Therefore, another of the unexpected positive outcomes of the virtual SPAN conference is that we are freed from having to choose which concurrent sessions to attend (and just knowing we are going to miss a good one). Here we can essentially attend them all.

I hope that you find these as insightful and valuable as I do.

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Accurately Identifying and Supporting English Learners With Suspected Learning Disabilities

By Elizabeth Burr

The poster *Accurately Identifying and Supporting English Learners With Suspected Learning Disabilities*, which was accepted through peer review for participation in the poster session at the since-cancelled California Council on Teacher Education Spring 2020 SPAN Conference on March 19 in Sacramento, appears in reduced size on the following page. Three segments of the poster, expanded in size to facilitate reading, then appear on the pages following the full poster. The poster is intended to point readers to the resource brief entitled *Stragegies to Identify and Support English Learners With Learning Disabilities,* the text of which is also included, along with a link to the PDF:

https://ies.ed.gov/ncee/edlabs/regions/west/Publications/Details/218

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Regional Educational Laboratory At WestEd

Accurately Identifying and Supporting English Learners with Suspected Learning Disabilities

April 2020

KEY CHALLENGE: IDENTIFYING ENGLISH LEARNERS WITH DISABILITIES

Educators often struggle with how to determine the source of an English learner (EL) student's academic difficulties. For example, is the issue one of language acquisition, a learning disability, or some other factor(s)? As a result, some EL students are under-identified for special education services while others are over-identified. To address this challenge, states and districts have developed guidance and tools for each step of the process.

PROCESS STEPS

1. IDENTIFICATION AND REFERRAL
2. ASSESSMENT
3. DEVELOPING AN INDIVIDUALIZED EDUCATION PROGRAM (IEP)
4. INSTRUCTION TO MEET STUDENT NEEDS
5. ONGOING REVIEW AND ASSESSMENT

KEY RESOURCES: COMPREHENSIVE GUIDANCE MANUALS

To date, 15 states and districts have developed comprehensive guidance manuals with hands-on, practical information on the following topics:

Identification
- Tiered pre-referral interventions
- Family engagement
- Role of culture / acculturation
- Differentiating between language acquisition and a disability
- Multidisciplinary team composition and roles

SAMPLE TOOLS
- *Extrinsic Factors Form*
- *Questionnaire Forms (student, parent, teacher)*

Assessment
- Review of multiple data sources
- Guidance on culturally and linguistically sensitive assessment
- Use of translators / interpreters
- Accommodations

SAMPLE TOOLS
- *Cumulative File Check Form*
- *Bilingual Assessment Tools Inventory*

Instruction and ongoing monitoring
- Instructional strategies
- Exit from special education services
- Reclassification from EL status
- Plan for continuous evaluation

SAMPLE TOOLS
- *High School Schedules for ELs with Disabilities*
- *Co-Teaching Models*

To access these resources, visit:

https://ies.ed.gov/ncee/edlabs/regions/west/Publications/Details/218

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Accurately Identifying and Supporting English Learners with Suspected Learning Disabilities

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4 INSTRUCTION TO MEET STUDENT NEEDS

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5 ONGOING REVIEW AND ASSESSMENT

To access these resources, visit:

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Strategies to Identify and Support English Learners With Learning Disabilities

February 2020

Key Challenge: Identifying English Learners with Disabilities
While some guidance exists, there are no definitive processes for identifying English learner (EL) students with learning disabilities and determining the best academic supports for them. Educators may struggle to determine whether a student's academic difficulties stem from a language development need, a learning disability, or some other factor(s).

Barriers to inconsistent identification of EL students with learning disabilities include:

- Lack of multi-tiered early intervention strategies.
- Poorly designed and implemented referral processes.
- Lack of options, beyond referral to special education services, for providing assistance to struggling students.

As a result, EL students are both under- and over-identified for special education services.

What's at Stake
EL students with learning disabilities who are not accurately identified may miss out on important special education services. And EL students who are misidentified as having a learning disability receive special education services that they do not require.

When students end up in classrooms or programs mismatched to their needs, it hampers their educational opportunities and achievement.

Audience for this Brief

- Policymakers developing systems for accurately identifying which EL students are eligible for special education services.
- District leaders developing procedures to ensure appropriate evaluations and referrals for EL students with a suspected disability.
- Teacher educators and educators working with EL students before and after the identification of a learning disability.

What We Know: Strategies for Educators
Research suggests some strategies to help educators differentiate between EL students who have difficulty acquiring language skills and those who have learning disabilities.

Questions to Ask
To accurately identify and support EL students with suspected learning disabilities, educators can start by asking:

- Is the student receiving instruction of sufficient quality to enable him or her to make the accepted levels of academic progress?
- How does the student's progress in listening, speaking, reading, and writing English as a second language compare with the expected rate of progress for his or her age and level of English proficiency?
- To what extent are behaviors that might otherwise indicate a learning disability be considered typical for the child's cultural background or part of the process of adjusting to life in the United States?

- How might extrinsic factors—that is, factors beyond classroom instruction and learning such as health, family circumstances, environmental factors, education history, and exposure to trauma—impact the student's academic progress?

Key Data to Inform Decisionmaking

To make appropriate referral to special education, a multi-disciplinary team (including the general education teacher, EL specialist, special education teacher, and district administrator) should review multiple sources of information, including:

- The cumulative file, including report cards, attendance history, behavior history, primary language proficiency, and progress in English language proficiency.
- Extrinsic factors beyond classroom instruction and learning that may impact learning.
- Documentation of interventions provided.
- Assessments of academic achievement, health, and areas related to the suspected disability.
- Instructional practices in the school environment.
- Observations in more than one setting.
- Family interviews.

What We Know: Strategies for Leaders

Research suggests various ways that state and district leaders can create consistent policies and processes to help educators accurately identify EL students with disabilities, including:

- Develop clear policy guidelines for pre-referral, referral, and assessment.
- Implement pre-referral strategies through tiered systems of support.
- Examine multiple sources of data when considering appropriate referral.
- Involve parents and families as integral sources of information.
- Provide professional development for those involved in pre-referral interventions, assessments, and referral processes.
- Institutionalize collaboration to include general education teachers, EL specialists, special education teachers, and administrators.
- Develop processes for ongoing review of academic, behavioral, and language-proficiency progress.

Review of State Practices

Drawn from a review of state education agency websites, five common themes suggest ways to identify and assist EL students with suspected learning disabilities:

- Assess EL students' language and disability needs using a multi-tiered system of supports.
- Have a clear policy statement that additional considerations will be used in determining the need for special education services for EL students.
- Provide appropriate test accommodations for EL students.
- Employ reclassification criteria specific to EL students with disabilities.
- Provide publicly available manuals to aid educators in identifying and supporting EL students with learning disabilities (see State and District Guidance Manuals).

Fifteen states and districts have developed guidance manuals to date. The following table ("Comparison of Features from 15 Guidance Manuals") provides a comparison of their features.

Comparison of Features from 15 Guidance Manuals on Supporting English Learner Students with Suspected Learning Disabilities

Identification	AZ	AR	CA	CT	IL	MA	MI	MN	MO	OK	OR	SDUSD	SELPA	VT	VA
Family engagement	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Role of culture / acculturation	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
Second language acquisition and progress		✓	✓	✓	✓		✓	✓	✓	✓	✓		✓	✓	✓
Multi-disciplinary team composition and roles	✓		✓			✓		✓		✓	✓	✓	✓	✓	✓
Sample tiered pre-referral intervention	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Sample forms and protocols for teachers to use to gather information and guide referrals		✓	✓	✓			✓	✓	✓			✓	✓		
Assessment	**AZ**	**AR**	**CA**	**CT**	**IL**	**MA**	**MI**	**MN**	**MO**	**OK**	**OR**	**SDUSD**	**SELPA**	**VT**	**VA**
Guidance on assessment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Use of translators / interpreters	✓	✓	✓	✓	✓		✓	✓		✓	✓		✓	✓	✓
Accommodations	✓		✓		✓	✓			✓	✓					
Checklists (IEP referral process, classroom observation, etc.)		✓	✓	✓	✓		✓	✓			✓	✓	✓		
Instruction and ongoing monitoring	**AZ**	**AR**	**CA**	**CT**	**IL**	**MA**	**MI**	**MN**	**MO**	**OK**	**OR**	**SDUSD**	**SELPA**	**VT**	**VA**
Instructional strategies	✓	✓	✓		✓	✓	✓			✓	✓		✓	✓	✓
Exit from special education	✓		✓												
Reclassification from EL status			✓						✓				✓		✓
Plan for continuous evaluation		✓	✓		✓			✓				✓	✓		
Illustrative student scenarios		✓	✓		✓	✓	✓						✓		
Other	**AZ**	**AR**	**CA**	**CT**	**IL**	**MA**	**MI**	**MN**	**MO**	**OK**	**OR**	**SDUSD**	**SELPA**	**VT**	**VA**
Laws and regulations	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓
FAQs			✓	✓			✓		✓				✓	✓	✓
Manual features	**AZ**	**AR**	**CA**	**CT**	**IL**	**MA**	**MI**	**MN**	**MO**	**OK**	**OR**	**SDUSD**	**SELPA**	**VT**	**VA**
Year published	2019	2003	2019	2011	2002	2019	2017	2019	2019	2007	2015	2012	2017	2010	2019
Total pages	25	95	464	38	67	16	93	(in process)	41	25	154	73	154	53	35

State and District Guidance Manuals

Fifteen states and districts have extensive guidance manuals to aid educators in accurately identifying and supporting EL students with learning disabilities:

Arizona: *Identifying and supporting English learners with disabilities*.
https://cms.azed.gov/home/GetDocumentFile?id=5c3e4c841dcb2511a0871254

Arkansas: *Arkansas state guidelines on nondiscriminatory assessment and addressing educational needs of English language learners with disabilities*.
https://arksped.k12.ar.us/documents/stateprogramdevelopment/elldocument.pdf

California: *California practitioners' guide for educating English learners with disabilities*.
https://www.cde.ca.gov/sp/se/ac/documents/ab2785guide.pdf

Connecticut: *English language learners and special education: A resource handbook.*
https://ctserc.org/documents/resources/CT-ELL-and-Special-Education.pdf

Illinois: *Serving English language learners with disabilities: A resource manual for Illinois educators*.
https://www.isbe.net/Documents/bilingual_manual2002.pdf

Massachusetts: *Guidance for supporting English learners with disabilities.*
http://www.doe.mass.edu/ele/disability.html

Michigan: *Guidance handbook for educators of English learners with suspected disabilities*.
https://www.michigan.gov/documents/mde/ELs_with_Suspected_Disabilities_Guidance_Handbook_-_2017_558692_7.pdf

Minnesota: *The English learner companion to promoting fair special education evaluations*.
https://education.mn.gov/MDE/dse/sped/div/el/ and http://www.asec.net/Archives/Manuals/ELL%20companion%20Manual%20020212%5B1%5D.pdf

Missouri: *Identifying, supporting and reclassifying English learners with disabilities*.
https://dese.mo.gov/sites/default/files/cur-eld-elsped-guidance-0918.pdf

Oklahoma: *Identifying and assessing English language learners with disabilities*.
http://sde.ok.gov/sde/sites/ok.gov.sde/files/SpecEd-IdentifyingELL.pdf

Oregon: *Special education assessment process for culturally and linguistically diverse (CLD) students: Guidance and resources, 2015 update*.
http://5c2cabd466efc6790a0a-6728e7c952118b70f16620a9fc754159.r37.cf1.rackcdn.com/cms/Special_Education_Assessment_Process_for_Culturally_and_Liguistically_Diverse_%28CLD%29_Students_with_logos_and_links_1489.pdf

San Diego Unified School District (CA): *CEP-EL: A comprehensive evaluation process for English learners: A process manual*.
https://www.sandiegounified.org/sites/default/files_link/district/files/dept/special_education/ParentServices/CEP-EL%20Manual.pdf

Special Education Local Plan Area (SELPA) Administrators of California Association: *Meeting the needs of English learners (ELs) with disabilities resource book*.
https://www.vcselpa.org/LinkClick.aspx?fileticket=KoRx7C95_nI%3D&portalid=0

Vermont: *English language learners in Vermont: Distinguishing language difference from disability.*
http://education.vermont.gov/sites/aoe/files/documents/edu-federal-programs-distinguishing-language-difference-from-disability.pdf

Virginia: *Handbook for educators of students who are English language learners with suspected disabilities.*
http://www.doe.virginia.gov/instruction/esl/resources/handbook_educators.pdf

Noteworthy Resources for Policymakers, Administrators, and Practitioners
In addition to the state and district guidance manuals listed in this brief, below are some resources that were developed to assist policymakers, administrators, and practitioners take more strategic action on behalf of EL students with disabilities.

- English Learners with Disabilities: Shining a Light on Dual-Identified Students.
  Audience: Policymakers, administrators, and practitioners.
  Resource type: Federal policy primer.
  https://www.newamerica.org/education-policy/reports/english-learners-disabilities-shining-light-dual-identified-students/
  This brief from New America provides an overview of the separate but intersecting federal policies that govern the identification of and services provided to ELs and students with disabilities.
- Supporting English Learners and ELs with Disabilities
  Audience: Teachers and coaches: http://www.doe.mass.edu/ell/disability.html
  Resource type: Videos and related resources
  In this collection of resources — produced by the Massachusetts Department of Elementary and Secondary Education — educators, practitioners, and schoo leaders demonstrate how they are working to meet the needs of EL students with disabilities. Hear their stories and download key resources for the classroom, school, and district on the following topics:
    - o Using a tiered system for support.
    - o Providing culturally and linguistically responsive instruction.
    - o Language acquisition/classroom resources.
    - o Evaluating EL students for special education services.
    - o EL specialists and the IEP process.
    - o Collaborating for student support.
- English Learner Disability Resources (Resources for IEP team members)
  Audience: Administrators and practitioners.
  Resource type: Webinar and resources related to interpreters.
  https://education.mn.gov/MDE/dse/sped/div/el/
  The Minnesota Department of Education developed resources such as guidance on holding IEP meetings with EL families and interpreters, a code of ethics and standards of practice for educational interpreters, glossaries of special education terms in other languages, and more. The department also produced a webinar featuring best practices in interpretation, tips for choosing and working with interpreters, and culturally specific strategies for interacting with and interpreting for Spanish, Hmong, and Somali speakers: https://mndepted-source.mediasite.com/mediasite/Play/fd9696f3763347c4a23150477907704d1d?autoStart=false

For More Information

Contact Elizabeth Burr. Email: eburr@WestEd.org
See the .PDF version of this brief at
https://ies.ed.gov/ncee/edlabs/regions/west/Publications/Details/218

Note

This brief is based on the following 2015 review of the research literature and state practice:

> Burr, E., Haas, E., & Ferriere, K. (2015). *Identifying and supporting English learner students with learning disabilities: Key issues in the literature and state practice*. Washington, DC: U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory West. https://ies.ed.gov/ncee/edlabs/regions/west/pdf/REL_2015086.pdf

It has been updated with new information on guidance manuals from state education agency websites.

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Investigating Whether Implementation of MTSS and UDL Frameworks Correlate to Teachers' Attitudes, Knowledge, and Confidence in Teaching Students with Autism in Mainstream Classrooms

By Dana Butler & Nicole Sparapani

Abstract

Autism is a neurodevelopmental disorder that may hinder an individual's ability to communicate and interact with others due to a lack of joint attention (Centers for Disease Control and Prevention, 2019; Mundy & Crowson, 1997). In addition, individuals with autism may experience fixated interests and repetitive, stereotyped behaviors (CDC, 2019). As an effort to place students with disabilities in the least restrictive environment, 90.8% of students with autism are spending at least some portion of their school day in general education classrooms (U.S. Department of Education, 2018). While an inclusive classroom may provide students with

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autism an opportunity to build relationships with other students and participate in school-wide environments, teachers report feelings of lower self-efficacy and higher burnout when teaching students with autism, resulting in higher teacher turnover and lower student academic success (Boujut et al., 2017). With the rise of teachers feeling underprepared when teaching in an inclusive classroom, new strategies like Multi-Tiered System of Support (MTSS) and Universal Design for Learning (UDL) are being implemented in the curricula of credential programs to promote differentiated learning for all students. In the current study, 30 K-12 pre-service teachers, who were concurrently enrolled in the UC Davis teacher credential program, completed a survey on their attitudes towards teaching students with autism, their understanding and application of MTSS and UDL frameworks, and their confidence in instructing an inclusive classroom. According to the survey responses, pre-service teachers who utilized MTSS and UDL frameworks in their inclusive classrooms had more positive attitudes and greater confidence when working with students with autism. In addition, pre-service teachers who reported positive attitudes towards students with autism also disclosed greater confidence when applying MTSS and UDL frameworks.

Introduction

Of the 6 million students that the Individuals with Disabilities Education Act (IDEA) protects, the U.S. Department of Education reported that 9.6% of these students have autism in 2016, which is a 4.6% increase from 2008 (2018). In California, 120,095 students with autism utilized special education services during the 2018-2019 academic year, constituting the third most prevalent category for disabilities recognized by IDEA (CDE, 2019). While the prevalence of autism is growing, more students with autism are entering general education classrooms for at least some portion of their day (ED, 2018). In 2018, 90.8% of students with autism spent at least 40% of their school day in general education classrooms (ED, 2018).

Autism is a neurodevelopmental disorder that impacts an individual's ability to communicate and build relationships (CDC, 2019). In addition, individuals with autism experience repetitive behavior or strong interests in specific topics (CDC, 2019). While an inclusive classroom may provide students with autism an opportunity to communicate and build relationships with other students, teachers report feelings of lower self-efficacy and higher burnout when teaching students with autism (Hunt, Goetz, & Anderson, 1986; Boujut, Popa-Roch, Palomares, Dean, & Cappe, 2017). When teachers feel stressed and incapable of providing the best for their students with disabilities, it is shown in poor student achievement (Boujut et al., 2017). To prevent teachers from feeling underprepared, new frameworks have been taught in credential programs, in the hope that they would provide strategies to improve the classroom environment.

With the incorporation of Multi-Tiered System of Support (MTSS) and Universal

Design for Learning (UDL) in the California Teaching Performance Expectations, education programs are adjusting curriculum to better prepare teachers to teach inclusive classrooms (Commission of Teacher Credentialing, 2016). In particular, MTSS acknowledges that all students should receive high-quality, differentiated instruction with behavioral and social-emotional supports (OCDE, 2015). To ensure all students' needs are met, some students will receive supplementary support and fewer students will receive intensified support (Ross & Lignugaris-Kraft, 2015). The intention of MTSS is to provide additional guidance to students who may be falling behind or struggling with various disabilities (OCDE, 2015). UDL is designed to provide students with methods of learning through multiple means of engagement, representation, and action/expression (CAST, 2018). To design a classroom that is accessible and inclusive, MTSS and UDL maximizes instruction to impact a wide range of learners (OCDE, 2015; CAST, 2018).

The purpose of this study was to determine how pre-service teachers are utilizing MTSS and UDL frameworks in their mainstream classrooms which include students with autism. We hope to identify how the implementation of MTSS and UDL frameworks in the inclusive classroom may impact teachers' attitudes, knowledge, and confidence. We hypothesized that if pre-service teachers implemented MTSS and UDL frameworks in their classrooms, then would have a positive attitude towards students with autism and feel confident teaching an inclusive classroom. We also hypothesized if pre-service teachers had positive attitudes towards students with autism, then they felt confident teaching an inclusive classroom because their outlook may have motivated the development of an accepting classroom environment that includes well-equipped preparation and instruction.

Method

Participants

The survey was made available to 140 pre-service teachers completing their credential in the School of Education at UC Davis. The final sample of this survey consisted of 30 pre-service teachers who were enrolled in the UC Davis Teacher Credential Program (2019–2020), yielding a 21.4% response rate. In the UC Davis Teacher Credential Program, all pre-service teachers had placements in California schools and taught under the direction of their expert teacher. In response to the question regarding confidence in teaching students with autism, 26.7% (n = 8) of pre-service teachers reported that they had very low or low confidence, 53.3% (n = 16) of pre-service teachers had average confidence, and 20% (n = 6) of pre-service teachers had high or very high confidence. Sixty-three percent (n = 19) of pre-service teachers self-reported that they had at least some experience of teaching students with autism.

Procedure

Participants were asked to complete one online Qualtrics survey on November 21, 2019 during the fall quarter of the one-year credentialing program. All pre-service teachers completed a summer course which introduced MTSS and UDL frameworks and were concurrently enrolled in a course centered on using MTSS and UDL to support learners with disabilities. While all 30 surveys were utilized in the descriptive analysis of the demographic and attitudes portion, surveys that stated no experience educating a student with autism and incompletion of relevant categories were omitted for correlational analysis. The major components of survey included the following: (1) a demographics form, (2) a set of questions about attitudes of autism, and (3) an inquiry about the knowledge, utilization, and confidence in using MTSS and UDL frameworks in an inclusive classroom.

Both the demographics form and set of questions about attitudes were modified from "The Sentiments, Attitudes, and Concerns about Inclusive Education Scale, Revised (SACIE-R)" (Forlin, Earle, Loreman & Sharma, 2011). Modifications included replacing the term "disabilities" with "autism," as well as changing statements to include characteristics of autism (i.e. emotion regulation, difficulty expressing thoughts verbally, joint attention; Mundy & Crowson, 1997). The fifteen statements regarding attitudes were answered using a Likert-scale of "Strongly Disagree," "Disagree," "Agree," and "Strongly Agree." Examples of the statements asked in this portion of the survey were "I am concerned that I will be more stressed if I have students with autism in my class" and "Students who have difficulty expressing their thoughts verbally should be in regular classes." See Table 1 in the Appendices for a list of all statements and the corresponding composite scores.

The final component of the survey was an inquiry of the knowledge, utilization, and confidence in using MTSS and UDL frameworks in an inclusive classroom setting. This scale included fourteen statements taken from the "California MTSS Framework" (2016) and the "UDL Guidelines" (2018), taken from Orange County Department of Education and CAST, respectively. The statements were asked in the context of preparation, actual implementation, and confidence using a Likert-scale. Examples of these statements included the following: (1) provide intensified interventions and supports for students with autism, (2) vary demands and resources to optimize challenge for students with autism, and (3) vary the methods for response and navigation for students with autism. See Table 2 and 3 in the Appendices for the full list of statements.

Results

Implementation of MTSS and UDL Frameworks

Out of the 30 total responses, 43% (n = 13) of pre-service teachers completed this portion of the survey and reported at least some experience teaching a student

with autism. As seen in Table 2 (see Appendices), these results suggested that approximately half of the pre-service teachers applied MTSS and UDL frameworks with their students with autism.

Trends Among Implementation of Frameworks and Attitude

Pre-service teachers who reported that they provide comprehensive behavioral supports also reported spending more time with students with autism. Additionally, pre-service teachers who reported that they facilitate personal coping skills also reported that they believe students with emotion regulation needs should be in regular classrooms. Finally, pre-service teachers who reported that they vary demands and resources to optimize learning opportunities also indicated that they believe students with IEPs should be included in regular education classrooms.

Trends Among Implementation of Frameworks and Confidence

Pre-service teachers reported that they felt greater confidence in their ability to teach an inclusive classroom when they were able to (1) provide supplemental interventions, (2) provide comprehensive social-emotional developmental supports, (3) facilitate personal coping skills, (4) vary the methods for response and navigation, and (5) use multiple media for communication.

Trends Among Attitudes and Confidence

Pre-service teachers who reported that they believe students who require emotion regulation support should be included in regular education classes also indicated that they felt confident with (1) providing intensified interventions and comprehensive behavior support, (2) varying demands and resources, and (3) facilitating personal coping skills for students with autism. Additionally, pre-service teachers who reported that they spend more time with students with autism also reported confidence in providing social-emotional supports.

See appendix for composite scores on each statement on the survey.

Discussion

According to the survey responses, pre-service teachers who utilized MTSS and UDL frameworks in their inclusive classrooms reported more positive attitudes and greater self-confidence when working with students with autism. In addition, pre-service teachers who reported positive attitudes towards students with autism also reported greater self-confidence when applying MTSS and UDL frameworks. These findings are promising, as they indicate that MTSS and UDL frameworks may promote a positive shift towards inclusivity of neurodiversity in general education classrooms.

In contrast with the current literature, teachers reported more positive attitudes

towards students with autism and higher rates of confidence in their ability to teach within an inclusive classroom. In a study by Avramidis and Norwich (2002), many teachers did not believe in inclusive practices for students with disabilities. However, our data revealed an overwhelming acceptance to students with autism. That is, over 85% of the pre-service teachers in our study believed that students who struggled with communication, joint attention, emotion regulation, and vision belonged in regular education classrooms. While 80% of our participants reported they have average, high, and very high confidence in their ability to teach students with autism, previous studies have reported that only 25% of teachers felt prepared to teach students with autism (Teffs & Whitbread, 2009). Although future research is needed, it is possible that implementation of MTSS and UDL frameworks is supporting pre-service teachers' improved confidence of educating students with autism.

When educators experience low levels of confidence in their ability to teach inclusive classrooms, it is possible that students with autism may be left out of rich educational experiences (Ahsan, Deppeler, & Sharma, 2013). Our findings are encouraging. The pre-service teachers in our study exhibited positive attitudes towards teaching students with autism, which may potentially lead to improved teaching and less emotional exhaustion (Boujut, Popa-Roch, Palomares, Dean, & Cappe, 2017). MTSS and UDL frameworks may provide a structure for a pre-service teacher to maximize their instruction in an inclusive classroom.

References

Ahsan, M. T., Deppeler, J. M., & Sharma, U. (2013). Predicting pre-service teachers' preparedness for inclusive education: Bangladeshi pre-service teachers' attitudes and perceived teaching-efficacy for inclusive education. *Cambridge Journal of Education, 43*(4), 517-535.

Avramidis, E., & Norwich, B. (2002). Teachers' attitudes towards integration/inclusion: a review of the literature. *European Journal of Special Needs Education, 17*(2), 129-147.

Boujut, E., Popa-Roch, M., Palomares, E. A., Dean, A., & Cappe, E. (2017). Self-efficacy and burnout in teachers of students with autism spectrum disorder. *Research in Autism Spectrum Disorders, 36*, 8-20.

California Commission on Teacher Credentialing. (2016). *California teaching performance expectations*. Retrieved from https://www.ctc.ca.gov/docs

CAST (2018). *Universal design for learning guidelines, version 2.2*. Retrieved from http://udlguidelines.cast.org

Centers for Disease Control and Prevention. (2019). *Autism spectrum disorder (ASD)*. Retrieved from https://www.cdc.gov/ncbddd/autism/hcp-dsm.html

Forlin, C., Earle, C., Loreman, T., & Sharma, U. (2011). The sentiments, attitudes, and concerns about inclusive education revised (SACIE-R) scale for measuring pre-service teachers' perceptions about inclusion. *Exceptionality Education International, 21*(3), 50-65.

Hunt, P., Goetz, L., & Anderson, J. (1986). The quality of IEP objectives associated with placement on integrated versus segregated school sites. *Journal of the Association for Persons with Severe Handicaps, 11*(2), 125-130.

Mundy, P., & Crowson, M. (1997). Joint attention and early social communication: Implications for research on intervention with autism. *Journal of Autism and Developmental disorders, 27*(6), 653-676.

Orange County Department of Education. (2015). *California MTSS framework*. Retrieved from https://ocde.us/MTSS/Pages/CA-MTSS.aspx

Ross, S. W., & Lignugaris-Kraft, B. (2015). Multi-tiered systems of support preservice residency: A pilot undergraduate teacher preparation model. *Journal of the National Association for Alternative Certification, 10*(1), 3-20.

Teffs, E. E., & Whitbread, K. M. (2009). Level of preparation of general education teachers to include students with autism spectrum disorders. *Current Issues in Education, 12*.

U.S. Department of Education. (2018). *Annual report to Congress on the implementation of the Individuals with Disabilities Education Act, 201*8. Retrieved from https://www2.ed.gov/about/reports/annual/

Appendices

Table 1

Composite Numbers and Percentages of 30 Preservice Teachers' Attitudes Towards Autism and General Disabilities

Attitude Statements	*Disagree (#)*	*(%)*	*Agree (#)*	*(%)*
I am concerned that students with autism will not be accepted by the class.	12	40%	18	60%
I dread the thought that I could eventually end up with a disability.	20	67%	10	33%
Students who have difficulty expressing their thoughts verbally should be in regular classes.	3	10%	27	90%
I am concerned that it will be difficult to give appropriate attention to all students in an inclusive classroom.	6	20%	24	80%
I tend to make contacts with students with autism brief, and I finish them as quickly as possible.	28	100%	0	0%
Students who struggle with joint attention should be in regular classes.	4	13%	26	87%
I am concerned that my workload will increase if I have students with autism in my class.	16	53%	14	47%
Students who require support with emotion regulation should be in regular classes.	2	7%	18	93%
I would feel terrible if I had a disability.	22	73%	8	27%
I am concerned that I will be more stressed if I have students with autism in my class.	17	57%	13	43%
I am afraid to look directly at a student with autism.	30	100%	0	0%
Students who require visual supports should be in regular classes.	0	0%	30	100%
I find it difficult to overcome my initial shock when meeting students with autism.	29	97%	1	3%
I am concerned that I do not have the knowledge and skills required to teach students with autism.	13	43%	17	57%
Students who need an individualized academic program should be in regular classes.	4	13%	26	87%

Table 2

Composite Numbers and Percentages of MTSS and UDL Implementation Completed by 13 Preservice Teachers Who Have Had Experience Teaching Students With Autism

MTSS/UDL Strategies	*Disagree (#)*	*%*	*Agree (#)*	*%*
Provide universal academic supports.	4	31%	9	69%
Provide supplemental interventions and supports for students with autism.	6	46%	7	54%
Provide intensified interventions and supports for students with autism.	9	69%	4	31%
Provide comprehensive behavior supports for students with autism.	5	38%	8	62%
Provide comprehensive social-emotional developmental supports for students with autism	6	46%	7	54%
Optimize individual choices and autonomy for students with autism.	6	46%	7	54%
Vary demands and resources to optimize challenge for students with autism.	6	46%	7	54%
Facilitate personal coping skills and strategies for students with autism.	8	62%	5	38%
Offer ways of customizing the display of information (auditory, visual, etc.) for students with autism.	6	46%	7	54%
Support decoding of text, mathematical notation, and symbols for students with autism.	6	46%	7	54%
Highlight patterns, critical features, big ideas, nd relationships for students with autism.	7	54%	6	46%
Vary the methods for response and navigation for students with autism.	6	46%	7	54%
Use multiple media for communication for students with autism.	6	46%	7	54%
Enhance capacity for monitoring progress for students with autism.	6	46%	7	54%

Table 3

Composite Numbers and Percentages of Confidence in Implementing MTSS and UDL Completed by 12 Preservice Teachers Who Have Had Experience Teaching Students With Autism

MTSS/UDL Strategies	*Disagree (#)*	*%*	*Agree (#)*	*%*
Provide universal academic supports.	1	9%	10	91%
Provide supplemental interventions and supports for students with autism.	6	50%	6	50%
Provide intensified interventions and supports for students with autism.	8	67%	4	33%
Provide comprehensive behavior supports for students with autism.	7	58%	5	42%
Provide comprehensive social-emotional developmental supports for students with autism	6	50%	6	50%
Optimize individual choices and autonomy for students with autism.	4	33%	8	67%
Vary demands and resources to optimize challenge for students with autism.	7	58%	5	42%
Facilitate personal coping skills and strategies for students with autism.	6	50%	6	50%
Offer ways of customizing the display of information (auditory, visual, etc.) for students with autism.	4	33%	8	67%
Support decoding of text, mathematical notation, and symbols for students with autism.	6	50%	6	50%
Highlight patterns, critical features, big ideas, and relationships for students with autism.	7	58%	5	42%
Vary the methods for response and navigation for students with autism.	6	50%	6	50%
Use multiple media for communication for students with autism.	4	33%	8	67%
Enhance capacity for monitoring progress for tudents with autism.	5	42%	7	58%

ECCLPS Update

A UC-CSU Partnership to Prepare Environmentally Literate Teachers to Address Climate Change

By Amy Frame & Grinell Smith

Abstract

Through the UC–CSU Environmental and Climate Change Literacy Project and Summit (ECCLPS), the University of California (UC) and California State University (CSU) systems partnered with key stakeholders to advance PK–12 environmental and climate change literacy, with the goal preparing all California teachers for sustainability and climate change education (ECCLPS Summary report available). At the ECCLPS summit, former Governor Jerry Brown, distinguished climatologist Ram Ramanathan, CSU Chancellor Timothy White, UC President Janet Napolitano, and National Academy of Sciences director Marcia McNutt, among many other leaders explicitly described climate change as an existential threat and expressed the commitment to move with all haste to teach climate science and climate literacy to every student in California. While the demands of teaching are already incredibly high, ECCLPS partners highlight the opportunity to infuse

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environmental literacy into the conscience and practice of new teachers as especially appealing. Of note: rather than thinking of addressing climate change as "one more thing," we think it is useful to help teachers see it is a *unifying concept* useful for framing research, policy, and in practice as we strive to meet our obligations to California's children to prepare them to thrive in an environment increasingly affected by changing climate.

Overview

California is a leader in both climate policy and in educational policies that support environmental and climate-related education. To help prepare teachers to enact the innovative instructional shifts in our state's frameworks and provide youth with the skills they are demanding, teacher educators must take a systematic and collaborative approach. This paper provides an update on the progress of the UC-CSU collaboration Environmental and Climate Change Literacy Project and Summit, known as ECCLPS. A steering committee and three sub-committees that focused on pre-service teacher training, in-service professional learning, and K-12 curriculum published a report and hosted a summit that brought together leaders and practitioners from across the PK to higher education fields. This paper outlines recommendations to public universities, state agencies, and others involved in teacher preparation. Two guiding questions frame the recommendations:

1. How can teacher education faculty work with colleagues from other departments, centers, initiatives, or community partners to support teachers in delivering locally and culturally relevant instruction on the interdependence between human and natural systems?

2. Given the current inclusion of climate and environmental literacy in the state curriculum frameworks and standards, instructional materials, and assessments, to what extent should policies governing teacher preparation program requirements or teacher performance expectations be amended to include these topics?

Discussion

From SB 100 (de Leon, 2018) which set a target of 100% carbon-free electricity by 2045[1] to Attorney General Becerra's lawsuit against the EPA to challenge the Trump administration's decision to revoke California's authority to set stiff vehicle tailpipe emissions and zero emission vehicle rules,[2] California is leading the way toward a healthy, sustainable economy. The success of such initiatives depends on educating a generation of motivated, competent leaders and workers in every field to address known and unforeseeable challenges. Fortunately, California has developed a robust educational policy framework that provides an inspiring vision of 21st century learning - civically engaged, solution-oriented, and equity-minded. It is now time for every available partner to support PK-12 educators to transition this vision into reality. One such promising partnership is the emerging collabora-

tion among our public universities that emphasizes supporting pre-service teachers in preparation programs to deliver curricula that build students' environmental and climate literacy.

Through the UC–CSU Environmental and Climate Change Literacy Project and Summit (ECCLPS), the University of California (UC) and California State University (CSU) systems are partnering with key stakeholders to support the urgent need to advance PK–12 environmental and climate change literacy with the goal of promoting innovative solutions to prepare future and current teachers to educate the 500,000 high school graduates per year in California so they become literate in environmental and climate change issues and solutions and become stewards of our planet. Over the course of 2019, a thirty person steering committee and the forty pre-service, in-service, and curriculum subcommittee members representing K-12, higher education, policymakers, and community organizations published an extensive report[3] and hosted leaders in these fields at a 220 person showcase and summit at UCLA.[4]

What has emerged from ECCLPS so far is an impressive amount of pioneering work and an unprecedented consensus from the top down and bottom up that we must collaborate to support educators in making important instructional shifts now to prepare our students to address climate-related challenges that will define their generation. At the ECCLPS summit, former Governor Jerry Brown, distinguished climatologist Ram Ramanathan, CSU Chancellor Timothy White, UC President Janet Napolitano, and National Academy of Sciences director Marcia McNutt, among many other leaders explicitly described climate change as an existential threat and expressed the commitment to move with all haste to teach climate science and climate literacy to every college student, and ultimately every PK-12 student in California. The UC and CSU systems have already signed a declaration of a climate emergency and a commitment to go climate neutral by 2030 sponsored through the United Nations.[5] It is now time for them to invest in building the know-how to make this happen.

California is leading the nation in its systemic policy support for teaching about climate change. SB720 (2018, Allen)[6] explicitly added climate change and environmental justice to its list of topics that are to be addressed through California's Environmental Principles and Concepts—list which already included air, energy, sustainability, pollution, public health, and resource conservation, among others. It also states that "Developing an environmentally literate population will enhance our ability to develop and implement solutions to our environmental literacy and environmental justice challenges, and will provide a critical foundation of skills and knowledge to help pupils compete in a growing job market." Therefore "It is the intent of the Legislature to … encourage and support the incorporation of the environmental principles and concepts into the credential requirements for both teachers and school administrators." This will help to "ensure that environmental literacy curriculum and learning experiences are made available on an equitable

basis to all pupils and that the environmental literacy curriculum and learning experiences reflect the linguistic, ethnic, and socioeconomic diversity of California" because currently, "there are wide disparities across the state in access to environment-based learning experiences." As teacher educators, it is our responsibility to help fulfill the bill's direction to state agencies to "assist in providing professional development to educators in environmental literacy, in the integration of environmental literacy with other state-adopted standards and curriculum frameworks, and in the development and implementation of curriculum and learning experiences inside and outside of the classroom that promote environmental literacy."

The ECCLPS objectives are ambitious but they are built on decades of solid educational policy and investments. ECCLPS endeavors to support, expand, update, and refine the current work underway, building on the following foundational initiatives. First, Assembly Bill 1548 (Pavley, 2003) launched the Education and the Environment Initiative[7] by mandating the creation of a multi-agency partnership to develop California's Environmental Principles and Concepts (EP&Cs)[8] and develop a model curriculum that demonstrated how to integrate the EP&Cs into standards-based instruction for all K-12 students. The State Board of Education approved the EP&Cs in 2004 and it has remained popular in print and digitally, in part because of its "California Connections" sections which illustrate content standards through real life examples from communities throughout the state.

In 2014, State Superintendent of Public Instruction, Tom Torlakson, launched a task force to write a *Blueprint for Environmental Literacy*.[9] It was a call to action for the education community to educate every California student in, about, and for the environment. The guiding principles for taking this work to scale are equity of access, sustainability and scalability of systems, collaborative solutions, commitment to quality, cultural relevance and competence, and exposing students to a variety of learning experiences in classrooms and outdoor environmental settings. In 2016, Superintendent Torlakson formed a steering committee, which is now operating as the California Environmental Literacy Initiative[10] (CAELI) and leading the work in PK-12 by advocating for a supportive state context, supporting the incremental infusion of environmental literacy into the K-12 instruction, professional learning, assessment, and accountability infrastructure, and cultivating leading-edge district and county office of education exemplars.

California's State Board of Education has demonstrated its commitment to environmental literacy by calling for the integration of the EP&Cs into state curriculum frameworks in Science (2016), History–Social Science (2016), and Health (2019). SBE-adopted instructional materials in these content areas must integrate the EP&Cs, and the California Science Test (CAST) will, in part, use the EP&Cs as a context for assessing California's Next Generation Science Standards (2013), for all students in elementary, middle, and high school grade band. By adopting the NGSS, the State Board guided all California educators to teach about climate change in accordance with the state-adopted standards since the learning progression

in these standards includes explicit instruction in human-environment interaction and in climate science from middle school onward.[11] Senate Bill 720 (Allen, 2018) later codified California's EP&Cs into California Education Code as the state's definition of environmental literacy and directed the State Board of Education, State Superintendent of Public Instruction, district superintendents, and school boards to work toward all students becoming environmentally literate members of society.

Within this supportive policy context the ECCLPS team met regularly for a year to conduct research on the state of the field and to provide recommendations to the universities for fulfilling California's vision of climate literacy. The EC-CLPS report's overall recommendations were as follows: Integrate environmental and climate change literacy across all subjects; Earth science is an indispensible discipline to holistically address the issues at stake; The state of California should create a task force for the promotion of environmental and climate change literacy; ECCLPS should create a task force for the implementation of this plan; and the California Commission on Teacher Credentialing (CCTC) will further refine and update opportunities for current pre-service teachers to integrate EP&Cs into core subjects they teach. This final recommendation is of special interest to the CCTC, as we may be able to provide guidance on this potential updating process.

After much deliberation, the ECCLPS team put forth these additional recommendations to the state: Update California's Education Code and subsequent earmarked funding to support three years of science in high school; Maximize the benefits of Local Control and Accountability Plans (LCAPs); and target financial support from the state specifically for the implementation of new standards and frameworks.

The preservice subcommittee recommended: the proposed efforts should endeavor to align with existing initiatives to leverage resources and build capacity for implementing the report's recommendations at the system-wide, institutional, and individual level; and the task force should advocate for the use of technological tools and materials to access educational materials including climate and environmental data.

The in-service subcommittee recommended that we: Increase teacher confidence in environmental and climate change literacy; Promote a fully-scaled statewide system for high quality teacher professional learning around California's Environmental Principles & Concepts; obtain administrative support for environmental and climate change literacy in schools; Emphasize action and civic engagement as part of environmental and climate change literacy; and create interdisciplinary learning models across different subject areas.

The curriculum sub-committee had two overarching recommendations, five best practices, three classroom vignettes, and a vetted list of free high quality curricular resources showcasing these approaches. They stated that: *Pre-service* courses for elementary and secondary teachers should endeavor, whenever possible, to expose student teachers to state of the art environmental and climate change literacy and *inservice* professional learning offerings for teachers should strategically convene

educators and relevant local working groups or community networks to re-examine and localize PK-12 course offerings.

The ECCLPS summit in December at UCLA served as a call to action and to help coalesce a broad coalition to move this work forward. In addition to the keynote speakers and panelists, the invited participants included PK-12 leaders, higher education leaders especially from schools of education, climate scientists, non formal educators, non-profit organizations, philanthropists, legislators and governmental agency leaders, and students from elementary school through college age. Each sub-committee hosted practitioners who showcased on the ground examples of K-12 climate education and related initiatives. The steering committee met again in early March at the CSU Chancellor's Office with an expanded circle of participants including indigenous leaders, teachers' union representatives, and pre-service students. The group was adamant about continuing this project together and a team is moving forward with a proposal for a joint center dedicated to supporting environmental and climate literacy.

This work is of great significance to the field of teacher education. Our state's leaders have set the course in terms of infrastructure and education that we must strive to meet. Climate change is a complex issue that requires more than just scientific knowledge to solve, and for our students to have the content knowledge, thinking skills, and socio-emotional intelligence to successfully meet the challenge, they must learn from teachers who themselves are comfortable working outside of disciplinary silos and willing to open their classroom doors to issues students are facing in their communities. Research on "Addressing the Climate Change Consensus Gap Among Preservice Teachers: A Four-Faceted Approach,"[12] has shown that four practices can help teachers combat misinformation about the strength of the scientific consensus about climate change: teach from an ethic of care, disrupt tribalism, engage in deliberation instead of debate, and anchor concepts firmly in specifics. While the demands of teaching are already incredibly high, the opportunity to infuse environmental literacy into the conscience and practice of new teachers is especially appealing. Rather than thinking of addressing climate change as "one more thing," we can help teachers see it is *the thing* our youth are rightfully demanding to learn about. With new funding for the teacher pipeline, especially in STEM,[13] California has the opening and the obligation to develop its model of robust and broad-based support for this work—in research, policy, and in practice.

Notes

[1] https://www.vox.com/energy-and-environment/2018/8/31/17799094/california-100-percent-clean-energy-target-brown-de-leon

[2] https://www.reuters.com/article/us-autos-emissions-california/california-other-u-s-states-sue-to-block-epa-from-revoking-state-emissions-authority-idUSKBN1XP25Q

[3] https://sites.google.com/tenstrands.org/ecclps/report?authuser=0

[4] https://sites.google.com/tenstrands.org/ecclps/program/program?authuser=0

[5] https://sustainability.uci.edu/2017/07/30/uc-csu-faculty-collaborate-carbon-neutrality/

[6] https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=201720180SB720

[7] https://www.californiaeei.org/

[8] https://www.californiaeei.org/curriculum/whatistaught/epc/

[9] https://www.cde.ca.gov/pd/ca/sc/environliteracyblueprint.asp

[10] https://ca-eli.org/

[11] https://d32ogoqmya1dw8.cloudfront.net/files/clean/educational_resources/clean-ngss/how_learning_about_climate_change_p.pdf

[12] Smith, G., & Rabin, C. (2019). *Addressing the climate change consensus gap among preservice teachers: A four faceted approach*. American Educational Research Association (AERA) Conference, April 4 – 9 2019, Toronto, Ontario.

[13] https://www.latimes.com/california/story/2020-01-11/newsoms-budget-includes-900-million-to-address-california-teacher-shortage

Professional Growth Among Mentor Teachers in a Co-Teaching Model of Preservice Education

By Katya Karathanos-Aguilar & Lara Ervin-Kassab

Introduction

A growing body of research has pointed to the potential benefits of a clinical residency field experience model in pre-service education (Grant & Wong, 2003; National Council for Accreditation of Teacher Education [NCATE], 2010). In the clinical residency model, fieldwork and coursework are coordinated to provide meaningful, field-based learning experiences for pre-service teachers under the guidance of trained mentor teachers. This approach to professional development for pre-service teachers has been associated with a number of benefits including increased collaboration (Badiali & Titus, 2009), higher teacher retention (Teitel, 2004) and high potential for effects on outcomes for students (NCATE, 2010). The clinical residency approach aims to re-conceptualize the nature of the clinical experience by positioning teacher candidates as co-teach-

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ers who collaboratively plan, instruct, assess, and reflect alongside their mentor teachers.

An increasing number of studies have explored conditions necessary for effective co-teaching to occur as well as factors that inhibit successful co-teaching implementation (Soslau et al., 2019; Hedin & Conderman, 2015; Guise et al., 2017). This research has focused primarily on the co-teaching relationship, degrees of co-teaching implementation, and affordances and constraints experienced by pre-service teachers in the co-teaching model. However, an area identified in the co-teaching literature in need of further exploration is the potential benefits that a co-teaching model holds for mentor teachers (Gallo-Fox & Scantlebury, 2016). This paper addresses this need by exploring ways in which mentor teachers involved in the Trio Project, a co-teaching yearlong residency program, reported experiencing professional growth during their experiences in the program. This study is one of only a few that focus explicitly on mentor teacher professional growth through co-teaching. Findings not only advance scholarship in the area of co-teaching and teacher residencies, but they also benefit teacher educators by providing important insights that inform programming and curricular development for teacher education programs.

Trio Yearlong Residency Program

The Trio Project was a five-year professional development program funded by a U.S. Department of Education national professional development grant. The goal of the project was to provide high quality, student outcomes-based professional development around academic language development, serving English learners, and data-driven decision-making. More specifically, the project aimed to provide sustained, job-embedded professional development for pre-service and in-service teachers by using San José State University's clinical yearlong residency program as a context for building professional learning communities. In the clinical residency model, the university's teacher education program worked in collaboration with partnership schools to coordinate coursework and fieldwork, provide training for mentor teacher teachers in instructional coaching, and sponsor professional development activities for mentor teachers and teacher candidates.

Each year of the project, two professional development days were held in August before the school year began. On the first day, mentor teachers participated in instructional coaching training and establishing common understandings of academic language and collaborative teaching practices. Pre-service teachers joined the training on day two and participated in dialogue and learning activities focused on academic language development, co-teaching models and practices, and relationship building (Bacharach, Heck, & Dahlberg, 2008). Co-teaching pairs engaged in activities designed to help them develop collegial relationships and equalize the power dynamics within the relationship. An important goal was for

mentor teachers and teacher candidates to recognize the dual roles of co-teachers (as both teachers and learners) (Soslau et al. 2019).

At each school participating in the Trio Project, clinical residency teams (comprising one teacher candidate, one mentor teacher, and one discipline-specific university faculty expert) worked together on a series of activities that focused on student academic language development. The pre-service and mentor teachers collaboratively co-planned, implemented curriculum, observed lessons, and mapped student progress through three cycles of inquiry during the course of the school year. This work required an integration of collaborative and mentoring skills within a professional learning community structure. There were three additional professional learning community days during the school year. Central to the learning community days was a focus on discipline-specific academic language development for English learners, data-driven decision making through cycles of inquiry, engaging in peer-problem solving around student learning, and optimizing student learning through co-teaching approaches.

It is important to note that the professional development of the Trio project began as a professional learning community, in which the leadership team provided extensive structures and activities for participants. However, over the course of the project, the voices of mentor and teacher candidates became instrumental in the development of the learning community activities. The community evolved into a semi-structured community of practice (CoP), as all of the participants (including the leadership team) learned with and from one another. These natural changes also led to the creation of micro-communities of practice (MCoP) (Ervin-Kassab & Drouin, 2020) focused on content-area teaching, co-teaching triads, and mentoring (with the first hour of the meeting days dedicated for mentors to meet with each together). The mentoring-focused community was grounded in cognitive coaching (Costa & Garmston, 2015) with conversations focused on the consult-collaborate-coach approach to supporting teacher development. Incorporating participant voice and choice in professional development was a particularly important aspect of the project and was an empowering experience for participants.

Another key component of the Trio Project was that it drew on researched-based features (*italicized below*) of effective teacher professional development (Darling-Hammond, et al., 2017): The CoP was *content-focused*, with subject-specific faculty consultants and content-specific peer grouping. The project *incorporated active learning* through cycles of inquiry around pupils' development of disciplinary academic language and co-teachers' analysis of student work. It supported general and content-specific *collaboration* during in-person meetings and through co-teaching training. The activities included *models of effective practice* through the analysis of co-teaching instructional videos during meetings and with veteran mentor co-teachers sharing examples of their own previous effective implementation of co-teaching approaches in the MCoP. The project provided *on-going coaching* and expert support for co-teachers through university supervision and content-area

university experts. These experts facilitated inquiry cycle planning conversations (offering feedback and reflection on co-planning and co-instruction). Finally, the project was of *sustained duration*, consisting of a one-year experience with five full-day CoP meetings and approximately eight on-site visits for each co-teaching pair from a university supervisor and content-area expert over the school year.

Methodology

In order to gain insight into the perspectives of teachers and to paint a holistic picture of their unique realities and individual voices through rich description (Creswell, 1998), a qualitative, or naturalistic, design was chosen for this study. The primary data source for this study included exit interviews (lasting approximately 30-60 minutes) conducted with mentor co-teachers annually at the end of the Trio yearlong residency experience over three years. Participants included a total of 43 mentor teachers (with some who participated in multiple years) who taught math, science, English, social science, or art. Interview questions were designed to surface mentor teachers' perspectives on their relationships with their teacher candidate; their experiences around planning, instruction, and assessment during co-teaching; professional development from the experience; and suggestions for improvement for the Trio Project co-teaching model. The interviews were transcribed and then examined for general themes related to co-teaching. After provisional data categories were established, initial themes were re-examined through the lens of professional growth among mentors, and related sub-categories were created and refined (Creswell, 1998).

The researchers also spent extended time interacting with mentor teachers through the co-teaching professional development days (five full days over the summer and school year). Having multiple roles in the project (i.e. content-area specialist, field supervisor), the researchers also conducted school site observations and meetings in which the researchers facilitated planning conversations for two inquiry cycles conducted by the co-teachers. Thus, the relationship between the teachers and the researchers developed over time. This relationship gave the researchers greater access to the ideas, insights, and practices of the teachers in the study.

Results and Discussion

Results indicated that co-teachers experienced meaningful professional growth in a number of areas. Professional growth described by teachers were grouped under four main themes: (1) pedagogical renewal and risk-taking, (2) critical reflection and "stepping it up," (3) in-situ feedback and refining practice, and (4) application of learning to leadership roles.

Mentor teachers shared how the Trio experience pushed them to engage in pedagogical renewal and risk-taking by stepping outside of their comfort zones. This "push" frequently came from the new ideas the credential candidates brought

to the conversation. They described learning about and trying out new strategies and approaches—particularly those related to the implementation of common core standards and integration of more technology (as exemplified by the mentor excerpt below):

> I feel like I've benefited tremendously from Brianne's fresh approach to things to, whether it's a technological advancement that I did not think of or telling the kids that they can use Vine or use YouTube...that's just not what I was trained to do back when I got my degree…but that fresh aspect has just been wonderful. She's also introduced great teaching websites...specifically art teaching websites…so a new, fresh, she's helping me see the classes with new eyes... (Candice, Art, year 3)

Mentors also described how the collaborative component of the Trio experience challenged them to be more metacognitive and explicit about their teaching practices and the rationale behind them. This led to "stepping up their game" by revisiting and improving certain practices. The mentor teacher excerpt below exemplifies the common theme that emerged specific to critical reflection and "stepping it up."

> So, there's a lot of, what you're doing as a mentor..., you're sort of defending your practice in a professional way. You have to really explain your rationale for all the moves you're making. And…by having to explain it, I start to question myself and wonder why I do certain things in certain ways. So, by having someone else constantly questioning you..., you have to explain it, and by articulating why you're going to do it that way, you actually learn about yourself. It makes me more on my game because I can't…you have to show up. You have to be fully prepared and professional because you know this other person's really counting on you. (John, English, year 5)

Mentor teachers in synergistic co-teaching relationships emphasized the value of having a peer who was immersed in their teaching context and understood their students to bounce ideas off and who could provide them constructive feedback on their practices. They described how helpful this was in refining their practices, particularly related to assessment (e.g., they benefited from having someone to calibrate and collaborate with in developing or revising rubrics). The mentor excerpt below exemplifies the ways that mentors described benefitting from in-situ peer feedback from a colleague who truly understands their classroom context and students.

> As far as my own professional development, it gives me someone to bounce ideas off of, like a soundboard...because she knows our students, because she sees them every day and she can actually name names...It's a more accurate soundboard compared to [an] instructional coach that the district sends you who doesn't even know which kid from which. That definitely helped me grow professionally in the sense of...I can make things more accurate for my instruction. I can make things more accurate for my handouts, and for my assessments, and be more prepared than if I were just doing this by myself. (Melissa, math, year 3)

Mentors further described ways in which they were able to apply learnings and

takeaways from their co-teaching and CoP experiences (especially from MCoP content that focused on cognitive coaching) to their department chair positions or other teacher-leader roles they held.

> This concept or this construct of moving from consulting to collaborator to coach has really affected…it's been a mindset change for me. I function as a teacher within my department, but I'm also the department chair, and I have release time to work with other teachers. And so, a lot of the learning that I've achieved in the program has been shared and brought out and utilized with other adults on campus. The program has made me a more effective collaborative and collegial colleague. And as a result of that, as department chair, I've been able to initiate PLCs within my department. And in that function, we're now writing a course, you know, on common assessments. (Gene, English, year 5)

Conclusions and Implications

The Trio Project focused on developing mentor and teacher candidate skills in co-teaching and meeting the academic language development needs of students through a year-long teacher residency model. The multiple iterations of the project over three years allowed the project to develop into a collaborative teaching and learning experience for all participants. Research on mentor teacher development provided deep insights into how co-teaching in a residency program supported mentor teacher professional development beyond the academic language focus of the project. Mentor teachers reported learning new teaching approaches from their pre-service co-teaching partners, being more metacognitive, "stepping up their practice," and transferring their learning from the Trio Project into their roles as teacher-leaders. These results demonstrate a strong potential for authentic, reflective, collaborative professional learning through communities of practice and co-teaching experiences.

These results, however, represent a specific program in a specific time and place. The project was able to provide teacher stipends, release time for meetings, and extensive university personnel support for co-teaching partnerships through a federally-funded grant. Since the grant ended, our teacher education program has been able to sustain some elements of the Trio project (e.g co-teaching professional development, relationship building activities, cycles of inquiry), but to a lesser extent than during the Trio project. Further exploration into feasible ways to robustly scale components of the Trio project to teacher education programs, as well as create capacity for ongoing support of mentor teacher development through co-teaching is needed.

While most mentor teachers experienced positive outcomes from their experiences in the Trio Project, this was not the case for all mentor participants. A small number of co-teaching pairs were unable to develop a synergistic relationship. These pairs often struggled with power imbalances within the relationship or appeared to have incompatible personalities. Further investigation into these phenomena could

provide important insights for programs seeking to initiate or improve a co-teaching residency model in collaboration with school districts.

Overall, the results of the project are promising in supporting mentor teacher professional development through a blend of communities of practice, co-teaching experiences, and cycles of inquiry. It is, however, difficult to determine the extent to which each component of the project influenced mentor teachers' professional growth. More exploration that parses out the influence of different components would be beneficial. Finally, this portion of the research also focused solely on mentor teachers. Additional research is needed into the growth and development of teacher candidates during their yearlong residency experience to gain a more complete picture of the success of the project.

References

Bacharach, N. L., Heck, T. W., & Dahlberg, K. R. (2008). What makes co-teaching work? Identifying the essential elements. *College Teaching Methods & Styles Journal (CTMS), 4*(3), 43-48.

Badiali, B., & Titus, N. E. (2010). Co-teaching: Enhancing student learning through mentor-intern partnerships. *School-University Partnerships, 4*(2), 74-80. Retrieved from https://eric.ed.gov/?id=EJ969840

Costa, A. L., & Garmston, R. J. (2015). *Cognitive coaching: Developing self-directed leaders and learners*. Lanham, MD: Rowman & Littlefield.

Creswell, J. (1998). *Qualitative inquiry and research design: Choosing among five traditions*. Thousand Oaks, CA: Sage.

Darling-Hammond, L., Hyler, M. E., & Gardner, M. (2017). *Effective teacher professional development*. Palo Alto, CA: Learning Policy Institute. Retrieved from https://learningpolicyinstitute.org/product/teacher-prof-dev

Ervin-Kassab, L. E., & Drouin, S. (2020, April). *Microcommunities of practice*. Presented at American Educational Research Association, San Francisco, CA.

Gallo-Fox, J., & Scantlebury, K. (2016). Coteaching as professional development for cooperating teachers. *Teaching and Teacher Education, 60*, 191-202. Retrieved from https://doi.org/10.1016/j.tate.2016.08.007

Grant, R., & Wong, S. (2003). Barriers to literacy for language-minority learners: An argument for change in the literacy education profession. *Journal of Adult and Adolescent Literacy, 46*(5), 386-394.

Guise, M., Habib, M. Thiessen, K., & Robbins, A. (2017). Continuum of co-teaching Implementation: Moving from traditional student teaching to co-teaching. *Teaching and Teacher Education, 66*, 370-382, Retrieved from http://dx.doi.org/10.1016/j.tate.2017.05.002

Hedin, L., & Conderman, G. (2015). Shared promises and challenges of coteaching: General-special education and mentor preservice partnerships. *Action in Teacher Education, 37*(4), 397-417. doi:10.1080/01626620.2015.1078756

National Council for Accreditation in Teacher Education. (2010). *Transforming teacher education through clinical practice: A national strategy to prepare effective teachers*. Washington, DC: Author. Retrieved from http://www.ncate.org/LinkClick.aspx?fileticket=zzeiB1OoqPk%3d&tabid=715

Soslau, E., Gallo-Fox, J., & Scantlebury, K. (2019). The promises and realities of implementing a coteaching model of student teaching. *Journal of Teacher Education, 70*(3), 265-279. doi: 10.1177/0022487117750126

Teitel, L. (2004). *How professional development schools make a difference,* 2nd Ed. Washington, DC: National Council for Accreditation in Teacher Education.

Policy Course in DC Enhances the Practice of Policy Analysis

By Belinda Dunnick Karge & Reyes Gauna

Introduction

The purpose of this paper is to share the content of a vibrant, interactive graduate course, *Policy, Law and Practice in Dynamic Settings*, that is taught in Washington, D.C., each summer.

This course provides graduate students with insight into the development of, response to, and ability to influence the larger political, social, economic, legal, and cultural contexts impacting educational organizations and practices. Professional learning must be continuous and engaging (Hirsh, Psencik, & Brown, 2014). The policy course is designed as a professional learning opportunity embedded into the graduate program in education. Adult learning theory purports facilitation of mindful content interactions (Karge & Phillips, 2016; Knowles 1970). Specific emphasis is given to in-depth discussions with elected and appointed officials and various organizational staff presently guiding decisions at national, state, local, and school levels involving standards, policies, and practices of education in the United States. The participant statements throughout the article were taken from the course evaluations.

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> *There were many opportunities provided to us as we visited Washington D. C. such as the Library of Congress, Department of Education, and the White House/ Eisenhower Building speaking to the President's directors. These experiences all provide me with federal insights and perspectives that I would not have had if it were not for this trip. Each speaker gave us insight into policy development and change. I am empowered knowing that at the local and state level I can support change in policy.* (Participant 15)

Significance

The content of the on-site course in Washington, D.C., has significant impact on the field of administrator and teacher education as a history of the political aspects inherent to education policy and how these policies transverse from the federal government to state education agencies, district offices, and as they are ultimately discussed and implemented at the local level.

> *The DC trip was critical to my success in this program. It was a wonderful experience being submerged into the educational policy sector. It was honestly the first moment I felt like a scholar*. (Participant 24)

Key Elements of Practice

The agenda for the week includes a visit to the United States Department of Education. While in the building, participants typically meet with a long-time Education staffer (30+ years) as well as an appointed official such as the United States Secretary of Education or an Under Secretary. Participants are also scheduled to meet with the United States Assistant Secretary for Education, Planning and Education Policy Development (see Figure 1).

On another day, the participants go over to the United States Department of State and learn about teaching overseas and how teachers and administrators are supported overseas by the Department of State's Office of Overseas Schools. Each evening an organization executive director and policy person for the organization (for example, the Association of Teacher Educators or the Childhood Education International Executives) serve as evening guest lecturers. These persons have first-hand experience with education policy and can share what their organizations do in Washington, D.C. Collectively, all of the speakers provide the participants with a chance to ask questions and participate in rich dialogue that encourages the mind to think from an ethical and educational viewpoint. These thought-provoking lectures and discussions give each individual participant an opportunity to get perspective that they otherwise would never be privy to in their local educational setting.

> *It was fascinating to hear the Education staff member talk about her policy experiences working under five different presidential administrations. I also learned so much about how our US citizen's children are cared for overseas. I might consider such a position after I retire*. (Participant 31)

Arrangements are made to meet congressional and senate representatives and discuss California initiatives. If representatives are not available, their education legislative assistants are eager to hear from California educators and share their knowledge and scope of work. Participants gain a practical understanding of the statutory and legislative process related to the educational profession. When available, appointments are established ahead of time to that participants can meet with their own United States Representative to hear that person's perspective on the education policy and local community issues from their part of the state (see Figure 2). An intern from one of the congressional offices serves as tour guide through the underground tunnels of the Capitol and through historical and policy exhibits.

> *While touring the Capitol with the Congressman's intern, it occurred to me what an amazing opportunity we were getting to learn about the Capital of the United States from both the student perspective (the intern was 18) and from the administration perspective (I am a principal)*. (Participant 48)

When Senator Dianne Feinstein, (D-CA), is in Washington, D.C., every Wednesday, her office hosts a constituent breakfast. The group attends this event each year. The graduate students are often surprised to learn that in the United States, the federal role in education is limited. Due to the Tenth Amendment, most education policy is decided at the state and local levels.

Figure 1

Meeting with Dr. Mitchell M. Zais, Deputy Secretary of Education, United States Department of Education

> *Every California teacher educator should have to attend a policy class in DC like ours. I learned not only about policy, but how to approach legislators and share my opinions and the significance of policy to teacher education. This was a once in a lifetime class. I have been to DC before, but never experienced it like this trip!* (Participant 37)

The participants experience a day at the Library of Congress researching a policy issue and hearing first-hand from a research librarian how to conduct policy research. The research librarian is able to customize the presentation to the group and areas they are researching for dissertation and thesis work. While in the Library of Congress, anyone can access full text articles from over 8.900 journals and 30 databases. A private group tour of both the architectural and the research areas proved to be impactful to all. The rich history of the Library of Congress as well as the depth of the research holdings give value and a deeper understanding of the potential research holds for both the researcher and the reader.

Figure 2

Dr. Reyes Gauna, Superintendent of the Byron Union School District and a Concordia University Irvine professor and several graduate students meet with U.S. Representative Jerry McNerney of California's 9th Congressional District.

Participants attend a session at the National Academy of Education where critical education research is conducted, as well as, a visit to the National Center for Education Evaluation and Regional Assistance. These organizations present to the group providing documents and research related to data-based decision making. In education, data must be kept front and center (Bernheart, 2016).

An additional value-added experience is getting to know the professors and fellow colleagues in the trip atmosphere. Prompting each other to be on-time, sharing public transportation, and group meals all add to the experience. The final evening class session is held at the Old Ebbitt Grill, one of the most iconic and historical restaurants in Washington, D.C. Established in 1856, the Grill is a place where many business deals and political conversations have occurred throughout history.

> *That last night, I could just smell the cigar smoke and imagine all the political deals and discussions that have taken place in the Old Ebbitt Grill— it added to the historical experience of the trip. There is so much rich history in DC. I took our 8th graders to DC three times and never did I experience it the way we did in this class. It was a life experience I will never forget*. (Participant 27)

The graduate students complete an assignment for analyzing, developing, and evaluating an education policy issue on their own or in small groups. Key problems and practice lead to sustained communication and collaboration within the participants as well as with the policy leaders they meet (Karge & Moore, 2015). They also participate in discussions responding to, *What is the role of policy analysis for education leaders? What is the value and importance of having predetermined alternative solutions for a policy issue?* The goal is to "promote deep and lasting learning that enhances the retention of information, leads to conceptual understanding, and equips students to be able to transfer their learning to new situations" (McTighe & Silver, 2020, p. 1).

> *One of the highlights from our course learnings is becoming more familiar with the analytic steps necessary to evaluate existing policy in education. When our professor, Dr. Gauna, asked our cohort "Why study policy?", I honestly was hesitant on how to answer. As I read Anderson (2011) and Alexander (2013) and worked on my policy problem, step by step, I have a better understanding as to why we should study policy*, (Participant 53)

A unique feature of the class is the use of social media. Prior to traveling, the participants are introduced to Twitter and given ideas on how to tweet, what to watch for and how policy can be impacted with a Tweet (Kwak, Lee, & Park 2010).

> *I had no idea what a powerful policy tool Twitter is! Hearing how Superintendents and other education leaders use Twitter to communicate their beliefs, systems, principles and policy was fascinating. I am going experiment with using this tool this academic school year*. (Participant 26)

Examination of the practical balance of the law and politics within the profes-

sional workspace is one of the outcomes of the course. Additionally, the goal of helping participants to explain how to navigate toward outcomes that demonstrate solid leadership, professionalism, and collaboration in their decision-making (Anderson, 2011). These outcomes are achieved through acquiring knowledge first-hand and learning what policy makers suggest for school improvement, evaluation, assessment, governance, funding, reform and regulation. These are areas of high impact for our education system in California.

Conclusion

In *The Leadership Challenge: How to Make Extraordinary Things Happen in Organizations*, Kouzes and Posner (2017) emphasize the critical need for leaders to be immersed in policy and culture. This policy trip to Washington, D.C., is a week-long immersion program for graduate students who are k-12 and university personnel. The participants inform and educate legislators, staffers, and other policymakers about their schools and districts and in turn learn from these leaders how policy takes place and what tools and resources can be used in California to improve schools and create programs that impact student achievement and success.

Note

For information on the schedule of the policy course or additional details, email the first author at Belinda.karge@cui.edu

References

Alexander, N. (2013). *Policy analysis for educational leaders*, Boston, MA: Peasron Education.

Anderson, J. E. (2011). *Public policymaking: An introduction*. Boston, MA: Cengage Learning.

Bernheart, V. L. (2016). *Data analysis for continuous school improvement*. New York, NY: Routledge.

Karge, B. D., & Moore, R. (2015). Common core: Teaching optimum topic exploration (TOTE). *Contemporary Issues in Education Research, 8*(1), 45-48.

Karge, B. D., & Phillips, K. (2016). Engagement strategies for enhancing college teaching. *Research in Higher Education, 30*, 1-6.

Knowles, M. (1970). *The modern practice of adult education: Androgeny versus pedagogy*. New York, NY: The Association Press.

Kouzes, J. M., & Posner, B. Z. (2017). *The leadership challenge: How to make extraordinary things happen in organizations*. Hoboken, NJ: Wiley.

Kwak, H, Lee, C, & Park, H. (2010) What is Twitter, a social network or a news media? In *Proceedings of the 19th international conference on world wide web*. (pp. 591-600). New York, NY: ACM.

McTighe, J., & Silver, H. F. (2020). *Teaching for deeper learning: Tools to engage students in meaning making*. Alexandria, VA: Association for Supervision and Curriculum Development.

Stephens, C. E, Widener, M. K. & Karge, B. D. (2018). *Thinking that matters: From challenge to change*. Vista, CA: The Discovery Source.

When Policy Implementation Needs Updating

Induction and the Changing Face of Inclusive Education

By Virginia Kennedy & Melissa Meetze-Hall

Introduction

The purpose of this article is to (1) describe a method for analyzing a policy and its implementation in schools, (2) connect this analysis to the need to update the focus and content of California's policy on the induction of new teachers, and (3) activate this analysis to the process of implementation updating.

Changes in special education, concomitant changes in the preparation of special education teachers in particular, and importantly, in the preparation of all teachers, have resulted in the need for broadening the content and focus of teacher induction programs.

New evidence-based practices and programs are becoming well-established, as research plus teacher and administrator experience shape these practices for different contexts. Significant changes to the Preliminary Education Specialist

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standards serve as background for understanding current and future beginning teachers' bases of knowledge and skills. The evolution of Multi-tiered Systems of Support, Social-Emotional Learning, and collaboration and co-planning/co-teaching practices all have a place in Individualized Learning Plans. All are essential components of inclusive education.

Relevant Literature

The literature on policy implementation indicates that when an education policy is created legislatively or by governing bodies, operationalizing the policy takes many forms, including the creation of new teacher preparation standards. Standards reify new ideas and philosophies that result in often significant changes to traditional roles of teachers. These new standards, beyond impacting the initial preparation of teachers, have a cascading effect on beginning teachers' knowledge and skills and the need for support while developing these teaching practices. As Viennet and Pont (2017) state, "In fact, 'education policy implementation' refers to different realities for different people: educators and students may consider policy implementation as the changes they bring to their everyday practices of managing schools, teaching, and learning" (p. 9). "Ultimately successful change depends on the talent and capacity of the people who are on the front lines implementing any new approaches" (Grantmakers Institute, p. 9). For successful implementation of new policies, education leaders should ensure that new policies don't falter due to many factors, including insufficient knowledge and training (p. 18). This would include those who provide support to new teachers.

The responsibility for teaching students with disabilities has expanded beyond the locus of special education classrooms and special education teachers. High leverage practices for students with disabilities are key, as the very definition of inclusive education has been transformed. Most students with disabilities are spending the majority of their school days in general education classrooms. Here again, the evolution of Multi-tiered Systems of Support (CTC, 2019), Universal Design for Learning, Social-Emotional Learning, and collaboration and co-planning/co-teaching practices have led to their specific inclusion in California's new teacher preparation standards in both Multiple Subjects and Single Subjects (CTC, 2016) and Education Specialist credentials (CTC, 2018). Induction mentors will play an important part in supporting new teachers as they develop competence and expertise in implementing these practices.

Method of Analysis

The emphases of this analysis are in two areas: (1) new teacher preparation standards that are consequently changing the support needs of beginning teachers, and (2) the implications for those who provide the support through induction programs. Sources were analyzed to identify the stated purpose of induction in

policies and programs, and to locate philosophical or specific reference to inclusive education.

The policy review consisted of identifying and reviewing sources of policy and supporting standards and program requirements regarding teacher induction, which included:

National descriptions and comparisons of induction programs.

California legislation and subsequent Education Code that created induction programs in California.

CTC Induction Program Standards and the California Standards for the Teaching Profession.

Brief Summary of Findings

Following are the key findings:

- Consistency in the overarching bases of policies underlying induction programs that strengthen the teaching force and increase new teachers' confidence and sense of efficacy and, therefore, the likelihood of their staying in the field.
- Near unanimous statements from reports from across the country that the purposes of induction programs are both practical (e.g., better teacher retention, higher test scores) as well as aspirational (increase in teacher excellence and efficacy).
- Recognition by most states with induction requirements that induction is a key phase in teacher development.
- Emphasis by most states, and California in particular, on the importance of close contact with a well-trained and knowledgeable mentor.
- While some induction programs focus on acculturating new teachers to their school and providing emotional and practical support, others prioritize helping new teachers identify and address problems of practice.

California's first induction program was the Beginning Teacher Support and Assessment system, instituted in 1992. Its impetus, as stated by state legislators, was the need to retain effective teachers within the profession and support beginning probationary teachers, leading to:

- California's stated induction policy is that all teachers in their first years of teaching should be supported in learning to teach.
- California's Induction Program Standards focus on the provision and process of support.
- Induction Program Standard #1 states: "Each Induction program must support candidate development and growth in the profession by building on the knowledge and skills gained during the Preliminary Preparation program to design and implement a robust mentoring system as described in the following standards

that helps each candidate work to meet the *California Standards for the Teaching Profession*."

◆ CTC's new program standards and Teaching Performance Expectations for Preliminary Multiple Subjects and Secondary Education teaching credentials (2016) and Preliminary Education Specialist teaching credentials (2018) contain key elements of inclusive education.

Implications for Teacher Education

Among the implications of this study are:

◆ The induction phase of teacher development is key to operationalizing changes in teaching practices, including the movement towards robust and effective instruction and support of students with disabilities in all educational contexts.

◆ The ultimate point of the induction policy is to provide support to new teachers that will make them more competent, resulting in a better education for students. So as a new perspective and mandate on teaching all students is encoded in Preliminary credential program standards, districts and induction mentors need to be supported in how they can support their mentees.

◆ Now that specific institutional and instructional practices are widely available to effectively and more comprehensively implement inclusive schooling, induction programs can incorporate resources on these practices into the professional development they provide their mentors.

◆ Mentor development that will increase their effectiveness in inclusive education, e.g.:

Collaborative training of all mentors on inclusive teaching practices.

Collaborative sharing of what works.

Observation of effective inclusive teaching practices.

Peer coaching between mentors.

Mentor self-reflection and goal-setting.

Providing ongoing professional development opportunities related to inclusive teaching practices.

Creation of institutional mentoring structures within the school district to provide consistency of support and enable the introduction of new research-based ideas to improve the roles of mentors.

◆ Educator preparation programs at the Preliminary credential level can encourage reflection and personal goal-setting, promote the writing of thoughtful Transition to Induction plans, and foster the ability to articulate one's teaching practices and questions.

Summary

California has changed its teacher preparation standards to purposefully broaden and deepen all teachers' ability to teach students with disabilities in inclusive settings. Examining the purpose of induction and its related program standards in California and other states, it is clear that to implement an induction policy and standard that builds on the new foundational knowledge and skills in inclusive teaching gained during teachers' Preliminary preparation programs will require a coordinated effort.

References

California Department of Education, Commission on Teacher Credentialing, & New Teacher Center. (2012). *Continuum of teaching practice*. https://www.ctc.ca.gov/docs/default-source/educator-prep/ca-ti/final-continuum-of-teaching-practice.pdf?sfvrsn=9b400217_0

California Department of Education. (2019). *California's multi-tiered system of supports*. https://www.cde.ca.gov/ci/cr/ri/

Commission on Teacher Credentialing. (2009). *California standards for the teaching profession* (CSTP).

Commission on Teacher Credentialing. (January, 2020). *Mild to moderate support needs teaching performance expectations comparison chart.* https://www.ctc.ca.gov/educator-prep/special- education

Grantmakers Institute. (2011). *Implementing education policy: Getting from what now? to what works.* https://files.eric.ed.gov/fulltext/ED537480.pdf

New Teacher Center. (2011). *Review of state policies on teacher induction*. https://newteachercenter.org/wp-content/uploads/California.pdf

Viennet, R. & Pont, B. (2017). *Education policy implementation: A literature review and proposed framework*. OECD Education Working Paper No. 162.

Is the Team All Right?

Depends on Who You Know

By Sombo Koo & Rebecca Ambrose

Abstract

We report findings from a mixed-methods study analyzing the social networks of a group of Multiple-Subject pre-service teachers (PSTs) in one teacher education program along two dimensions: (1) *close relationship* and (2) *partners in equity conversation*. Our research was guided by the following questions: Do PSTs have equity conversations with those they are close to? Why or why not? We found that 28% (17/61) of the PSTs did not have equity conversations with anyone, and 16% (10/61) of the PSTs had equity conversations with those they are close to. Interviews indicated that some students sought relationships with those who shared their commitments towards social justice whereas other students had close relationships with a focus on engaging in social activities. These findings have implications for the ways in which administrators and teacher educators design programs to foster cohesive networks.

Keywords: teacher education program, social capital, social network analysis, equity

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Introduction

Fifteen years have passed since Ladson-Billings (2005) posed a simple question regarding the improvement of schools through teacher education, "Is the team alright?" She asserted that "the real problems facing teacher education are the disconnections between and among the students, families, and community and teachers and teacher educators" (p. 229). To provide our own answer to this question, we studied the social dynamics of a smaller subset of the teacher education team; pre-service teachers (PSTs). In particular, we focus on the connections (or lack thereof) among PSTs and ask how relationships can motivate their commitments in becoming advocates for equity (Athanases & de Olivera, 2007).

We draw on a mixed-methods approach to analyze the relationships among one group of PSTs enrolled in a selective post-baccalaureate teacher education program that is situated in a large research university located in CA. We use social network analysis to systematically study networks among PSTs and conduct interviews to explore how some relationships foster conversations regarding equity and social justice in schools while others do not. In this way, we can provide an empirical answer on how to determine whether "the team is all right."

Background

Social Capital and Social Network Theory

Researchers using a social network perspective focus on relationships between actors when studying social phenomena (Borgatti, Everett, & Johnson, 2018; Borgatti & Ofem, 2010; Daly, 2010; Wasserman & Faust, 1994). A *social network* is comprised of a set of individuals (or *actors*) and the relations (or *ties*) among them (Wasserman & Faust, 1994). A key assumption of the network perspective is that ties between individuals act as channels for the flow of resources such as information or support (Borgatti, Everett, & Johnson, 2018; Wasserman & Faust, 1994). Moreover, the structure of the network provides insight as to how some individuals have more access to said resources than others (Lin, 2002; Wasserman & Faust, 1994). Studying teacher networks can provide insight into how relationships among peers provide PSTs access to beneficial resources.

The concept of social capital complements the understanding of networks (Baker-Doyle, 2011; Daly, 2010), and is one of the most drawn on exports from sociology used by educational researchers (Dika & Singh, 2002). Lin (2002) defines *social capital*, "as resources embedded in a social structure which are accessed and/or mobilized in purposive action" (p. 35). A network is a "social structure" where high levels of cohesion—the level of interconnectedness (Borgatti, Everett, and Johnson, 2018)—is an indication of high levels of social capital (Bridwell-Mitchell & Cooc, 2016; Lin, 2002). Cohesive networks increase the likelihood for successful action as resources are flowing freely along ties between actors. To achieve high levels of

cohesion actors within the network need to value relationships with other actors and be willing to invest the time and energy needed to develop such relations.

Multiple Networks on Among a Set of Actors

Multi-relational networks are social networks in which multiple relationships exist among the same set of actors (Wasserman & Faust, 1994). As a consequence, different relationships offer an actor access to different types of resources. For example, emotional support can be a resource that gives rise to one set of relationships among actors while information resources can be the basis for a different set of relationships (Baker-Doyle, 2012).

In a school setting for example, a network that represents the flow of instructional resources among teachers might have a different set of ties than a network showing the flow of class management advice. The extent to which these networks overlap depends on whether individual actors associate with a limited number of colleagues who they share a variety of resources with or have a wide array of associations which serve particular purposes. On the other end of the spectrum, non-overlapping ties represent individual actors who do not associate with others along one or multiple relationships

We embarked on this study to determine the nature of social networks in a teacher education program. We were particularly concerned with whether peers served as resources for one another regarding becoming advocates for equity. Before discussing our hypotheses about peers as social justice resources, we briefly discuss social justice as a focus of teacher education.

School Improvement Through Social Justice Teacher Education

Across the U.S. many teacher education programs are embedding themes of equity and social justice in their curricula (Cochran-Smith, 2010; Zeichner, 2009). Researchers have documented the ways in which teacher education programs address PSTs' equity and social justice beliefs through coursework as well as individual experiences (Chubbuck & Zembylas, 2016; Cochran-Smith, 2010; Enterline et al., 2008; Mills, 2009; Mills & Ballantyne, 2010). Both administrators and teacher educators continue to explore and develop practices that can support and examine PSTs' beliefs of teaching for social justice (Reagan, Chen, & Vernikoff, 2016).

Given the attention that teacher education programs have in promoting social justice beliefs among TCs, we wondered the extent to which peers influenced one another in this regard. Researchers outside of education are studying how networks can effect changes in each other's beliefs and attitudes (Borgatti, 2005; Chamley, Scaglione, & Li, 2013). We hypothesized that some close relationships between PSTs could be based on shared commitments to social justice. Moreover, peers with strong social justice commitments might share their resources with others beyond their closest peers. In this case, those resources could include their own K-12 experience,

their experience in their student teaching placements, the knowledge about structural inequalities that they may have learned in their course work, a way of talking about equity in schools, etc. We wondered if PSTs had relationships that involved the flow of resources and if so, if peers tended to depend on those they felt "close" to for these resources or if they sought out others to converse with about equity issues.

Social Capital and Social Network Analysis in Teacher Education

Few studies have drawn on social network analysis to investigate the role of peer-to-peer relationships among PSTs to study teacher development with the exception being Liou et al. (2017). Researchers have taken interest in teacher relationships and teacher collaboration given its impact on school improvement and capacity building (Moolenaar, 2012), but limited research exists in understanding role of peer-to-peer relationships have on PSTs' commitments to equity and social justice. We contribute to the limited body of work drawing on teacher development research to provide insight on the role of peer-to-peer relationships on teacher development.

While few have studied social networks among PSTs, scholars and policy makers have identified the importance of relationships among actors as a key force in improving schools (Baker-Doyle, 2012; Daly, 2010; Ladson-Billings, 2005; Moolenaar, 2012; Noguera, 2001). As stated earlier, teacher relationships act as channels for the flow of resources, information, or support (Baker-Doyle, 2012) and teacher networks can act as opportunity structures for PSTs to draw on resources for purposive action. For example, Baker-Doyle (2012) finds that first year urban teachers construct intentional professional networks as a way to collaborate and interact with selected individuals to solve issues. With respect to teacher education, the number of relationships has been tied to performance (Liou et al., 2017); teacher retention (Moolenaar, 2012), and professionalism (Little, 2003).

Research Questions

To better understand how peer-to-peer relationships provide or constrain opportunities for PSTs to discuss their commitments to equity and social justice we ask the following research questions:

Do PSTs have equity conversations with those they are close to?
Why or why not?

Data Sources

Context for the Study

This study takes place at a selective post-baccalaureate teacher education program that is situated in a large research university located in CA. The program prepares between 120-140 prospective candidates for either multiple- and single-

subject credentials each year. Candidates receive their teaching credential at the conclusion of one year of coursework & student teaching and have the option of completing a MA in their first year of teaching. The program embeds themes of equity and social justice into their curriculum to help teacher candidates develop foundational understandings to support them in becoming advocates for equity. The program utilizes a cohort model to facilitate administration and organization of coursework (Seifert & Mandzuk, 2006). The multiple-subject teacher candidates are placed into two cohorts: Cohort Red ($N = 36$) and Cohort Blue ($N = 41$); we are using pseudonyms. Both cohorts convene together in at least one class each quarter. They have the remainder of their courses with others in their Cohort.

Participants

Teacher candidates matriculated into the program in summer 2018. The entire group was comprised of 77 teacher candidates of which 61 participated in the study (79%). Of the 61 participants there were 52 female, 8 males, 1 other. The race/ethnicity background is 5 African American/Black, 2 American Indian/Alaska Native, 12 Asian American/Asian, 15 Latinx/Chicanx, 23 Caucasian/White, and 5 Other/Declined to State. Of the 61 participants, 11 candidates pursued a bilingual authorization in addition to the multisubject credential.

Method

Network Data

Participants were asked to respond to five network questions, but for the purposes of this study, we focus on two networks:

> SQ1: Of the cohort members, who are those with whom you have a 'close' relationship? By 'close' we mean a person with whom you share personal information and/or spend time within informal activities/settings.
>
> SQ2: Please select the frequency of interaction with members of the cohort with whom you seek out to have conversations about equity, social justice, and diversity where you question the status quo and consider who is and is not being served by the existing curriculum and pedagogy.

Each question asked individuals to identify who their close relationships are within the class of 77 PSTs. Individuals were instructed to not choose themselves. The first question asked individuals to identify other PSTs who they had a "close relationship with" they could choose as many individuals as they desired. The second question provided participants with four levels: 1—Quarterly, 2—Monthly, 3—Weekly, 4—Daily.

Social Network Analysis

Wasserman and Faust (1994) describe social network analysis as a "formal,

conceptual means for thinking about the social world" through the use of graph theory and matrix algebra (p. 11). A network is comprised of two pieces of information: the number of actors and ties. We draw on the methods from Wasserman and Faust (1994) and Borgatti, Everett, and Johnson (2018) for the analyses and in particular we tend to the direction of nominations.

Data for the equity conversation question was transformed so that Quarterly and Monthly responses were represented as non-ties, where Weekly and Daily responses were represented as ties. As a convention for this study, we will use *equity conversation* to abbreviate *at least weekly conversations about equity, social justice, and diversity where you question the status quo and consider who is and is not being served by the existing curriculum and pedagogy*. The first question generates the *Close Relationship Network* (CRN). The second question generates the *Equity Conversation Network* (ECN). From these networks, we generated the overlap network which we will call *Close Relationship plus Equity Conversation Network* (CR+EC N). This is constructed by taking the Hadamard product (Horn & Johnson, 2012) of the CRN and ECN adjacency matrices.

A *sociogram* (or a *graph*) is a depiction of actors and their directed ties in two-dimensional space (Wasserman & Faust, 1994). A subset of a sociogram that involves a selected set of nodes and ties are called *subgraphs*. An ego network is a subgraph that consists of a focal actor (ego) and whom they nominated. We focus on two main methods to study relational patterns in networks: (1) the comparison of each actors' close relationship network and equity conversation network and (2) the *paths* between actors. For directed graphs, a path is a sequence of nodes that all follow the same direction (Borgatti, Everett, & Johnson, 2018). By comparing ego networks between actors we can gain insight into who are drawing on a set of individuals for resources embedded in close relationships, equity conversations, or both.

Cohesion will be operationalized through *network density*. Network density is calculated by the number of ties over the number of all possible ties. The density is calculated by N(N-1)/2 where *N* represents the number of actors. Densities are often reported as percentages as it represents the probability for two individuals to have a relationship.

Interview Data

We conducted interviews with 9 individuals. Each interview lasted approximately 45-mintues to 1 hour. Interview participants included: 3 African American/Black females, 3 White Females, 2 White Males, 1 Asian American/Asian female.

Each interview was transcribed. The analyses of each interview consisted of two-cycles (Saldaña, 2015). In the first cycle we searched for passages in which PSTs purposely drew on their relationships for emotional support, academic support, or supporting advocacy actions. Forms of advocacy actions included voicing their opinion in addressing issues in schools along some social category (race,

class, gender, religion, ability, etc.). This was followed by a second cycle in which we wrote analytic memos for each interview to ensure that codes were configured appropriately; that is, our two-cycle process identified areas in which relationships supported advocacy actions.

We present excerpts of two individuals. The first is S19 who is an African American/Black female and the second is S58 who is a White male. Both S19 and S58 belong to Cohort Red. Our goal in juxtaposing their opinions around equity conversations is to highlight the ways in which they navigate the program through relationships.

Results

Analyses of Sociogram and Ego-Networks

Sociograms and density measures were generated from UCINET 6 (Borgatti, Everett, & Freeman, 2002). Figure 1 is the CRN, Figure 2 is the ECN, and Figure 3 is the CR+ECN (See Appendix). These figures show the connections among all PSTs for the both CRN, ECN, and CR+ECN provide insight on the choices made by each teacher candidate. Figure 4 shows the directed subgraph of all the close relationships among S19 and S58 (See Appendix). This subgraph shows no direct path exists between S19 and S58. This implies that resources from close relationships or engagement in equity conversation does not flow between S19 and S58.

Both CRN and ECN show 22 individuals on the periphery, 16 of whom did not participate in the survey; 6 participated in the survey but did not nominate anyone with whom they have close relationships with nor whom they have equity conversations.

Ego-network analyses indicate that some PSTs do not have equity conversations with those that they are close to, while some have equity conversations with peers who they do not have a close relationship with. We report the following: (1) 33 PSTs listed more close relationships than those with whom they had equity conversations; 17 of the 33 PSTs did not list anyone with whom they had equity conversations, (2) 10 PSTs listed the same individuals as those they had close relationships and with whom they had equity conversations, (3) 11 PSTs listed someone outside of their close relationship network in their equity conversation network, and (4) 7 PSTs had listed more individuals with whom they have equity conversations than close relationships.

Cohesion

Tie statistics can be found in Table 1 (See Appendix). The density for the CRN and ECN was 4.7% and 2.3% respectively. The difference in density measures along the CRN and ECN indicates that each network serves as different opportunity structures (Molm, Whitham, & Melamed, 2012); the uptake of resources embed-

ded in close relationships are higher than that of resources embedded in equity conversations. Both Cohort A and Cohort B showed higher levels of cohesion when analyzed as separate subgraphs. The density measures for Cohort Red and Cohort Blue was 8.1% and 8.0% respectively for the CRN; 4.6% and 3.5% respectively for the ECN. Ego network analyses also supports this claim given that most individuals have more close relationship ties than equity conversation ties.

The tie statistics can be found in Table1 for the CR+ECN (See Appendix). This network represents the overlap ties between the CRN and the ECN. The density for the entire CR+ECN is 1.7%; which represents the probability to which individuals are having both close relationships and equity conversations. The density measures for Cohort Red and Cohort Blue was 3.7% and 2.8% respectively.

Advocacy Resources Through Relationships

PSTs share their perspectives and experiences with respect to advocating for equity in both informal and formal environments and for some, what they hear during class leads to friendships outside of class. S19, for example, talked about building friendships with individuals who shared her views about equity and social justice.

> S19: So, S47 kind of initiated that [friendship] with me like she was just like "This is the role I want to play in your life." Like, I was just minding my business. Like I was just speaking out in the class and she came up to me. A few others did this too. And that's how I can tell these are the teachers that are going to change students' lives and you can understand where I'm coming from what I'm trying to advocate for students and you're like, it's either a snap or just acknowledgement. Like I feel you, I'm on that same level. It's just like, "Okay, wow, we can be friends."

S19 survey responses showed that she had close relationships with the PSTs that she had equity conversations with. These peers were from different cohorts.

Some students did not necessarily have equity conversations with others. S58 for example did not build their close relationships around advocating for equity and did not nominate any with whom they had equity conversations.

> S58: When you start talking about equity it is more of a politics thing than anything else. So I'm not really a person that talks about politics with others, I just keep it to myself. I don't really see a reason to talk about it because everyone's going to have their own views like leaning one way or the other, but I definitely feel like everyone in the program like feels very similarly about it.

In particular, S58 avoids having discussions about equity and he equates such discussions with politics. He asserts that students feel similarly about equity which is an interesting claim since he avoids discussing the subject.

In contrast to S19, S58's close relationships were based on social activities not directly related to academic work as opposed to shared commitments.

> S58: I'd say like close friends would be hang out outside of class without a work-related burden, like school-related [00:16:29] thing. So it's like seeing each other on your own time. I guess. [Interviewer: Or no like School talk or anything like that or?] Not necessarily no school talk. We'll talk with just more. So like people you just hang out with I guess. Like going out and getting some drinks or like et cetera, that kind of thing.

As S58 indicates, he draws on his relationships as a means to hang out and unwind.

Both S19 and S58 acknowledge differences in cohort dynamics. There are two features to account for within each testimony. First, S58 provides insight as to why he does not have equity conversations. Secondly, S19 acknowledges a tension between Cohort Red and Cohort Blue which may be due to the differences in perceived value regarding equity conversations.

> S58: Yeah. In like Cohort Blue, there's people that are very equity and social justice focused. Like, more so than I'd say everyone else in the program. You almost don't wanna say things unless you're those people because you're not on their level. It sounds weird saying it that way but if you just mention something or if you have a different view than them they're so outspoken that things would just not go in a direction you'd want them to go in the first place.

> S19: I felt like we would probably get to know more people and create different friendships and things like that but I was with the same people [the] whole year. I feel like my experience would probably be different if I got to talk to other people. So I feel like that's something the [Institution] needs to work on. It's not splitting up Cohort Red and Cohort Blue like that. Because then you also had tension between Cohort Red and Cohort Blue.

The desire to build relationships with others across cohorts was important for S19. For example, S47 who is in Cohort Blue played an important role in S19's experience at program. Within S19's testimony she mentions how her own "Blackness" was not well received by the individuals with whom she shared a school site and cohort. S47, who is an African American female on the other hand may provide resources that are beneficial to her racial and gender identities.

Discussion

Our research was guided by the following question: Do PSTs have equity conversations with those they are close to? Why or why not? In combining the quantitative and qualitative data we see that some PSTs, like S19, based their friendships on social justice commitments and tended to frequently have equity conversations with those that they were close to. Other PSTs, like S58, had close relations with peers who they never had equity conversations with. Furthermore, S58's interview indicated that he shied away from such conversations because he felt that he was not equipped to engage in them.

An implication of this study is that peers can serve as resources for one another to become advocates for equity, but this is more likely to happen when PSTs already hold social justice commitments. We believe that programs need to be more intentional about fostering equity conversations so that students like S58 can benefit from the resources that S19 has to offer. To determine whether or not the "team is all right", one must look at the cohesiveness of networks. Administrators and teacher educators may want to develop policies and practices that improve network cohesion.

References

Athanases, S. Z., & De Oliveira, L. C. (2008). Advocacy for equity in classrooms and beyond: New teachers' challenges and responses. *Teachers College Record, 110*(1), 64-104.

Baker-Doyle, K. J. (2011). *The networked teacher: How new teachers build social networks for professional support*. New York, NY: Teachers College Press.

Baker-Doyle, K. J. (2012). First-year teachers' support networks: Intentional Professional networks and diverse professional allies. *The New Educator, 8*(1), 65-85.

Borgatti, S.P., Everett, M.G.,& Freeman, L.C. 2002. *Ucinet 6 for Windows: Software for social network analysis*. Harvard, MA: Analytic Technologies.

Borgatti, S. P., Everett, M. G., & Johnson, J. C. (2018). *Analyzing social networks*. Thousand Oaks, CA: Sage.

Borgatti, S. P., & Ofem, B. (2010). Social network theory and analysis. In A. J. Daly (ed.), *Social network theory and educational change* (pp. 17-29). Cambridge, MA: Harvard Education Press.

Bridwell-Mitchell, E. N., & Cooc, N. (2016). The ties that bind: How social capital is forged and forfeited in teacher communities. *Educational Researcher, 45*(1), 7-17.

Chamley, C., Scaglione, A., & Li, L. (2013). Models for the diffusion of beliefs in social networks: An overview. *IEEE Signal Processing Magazine, 30*(3), 16-29.

Chubbuck, S. M., & Zembylas, M. (2016). Social justice and teacher education: Context, theory, and practice. In *International handbook of teacher education* (pp. 463-501). Singapore: Springer.

Cochran-Smith, M. (2010). Toward a theory of teacher education for social justice. In *Second international handbook of educational change* (pp. 445-467). Dordrecht, Germany: Springer.

Daly, A. J. (2010). Mapping the terrain: Social network theory and educational change. In A. J. Daly (Ed.), *Social network theory and educational change* (pp. 1-16). Cambridge, MA: Harvard Education Press.

Enterline, S., Cochran-Smith, M., Ludlow, L. H., & Mitescu, E. (2008). Learning to teach for social justice: Measuring change in the beliefs of PSTs. *The New Educator, 4*(4), 267-290.

Horn, R. A., & Johnson, C. R. (2012). *Matrix analysis*. Cambridge, UK: Cambridge University Press.

Ladson-Billings, G. J. (2005). Is the team all right? Diversity and teacher education. *Journal of Teacher Education, 56*(3), 229-234.

Lin, N. (2002). *Social capital: A theory of social structure and action* (Vol. 19). Cambridge,

UK: Cambridge University Press.

Mandzuk, D., Hasinoff, S., & Seifert, K. (2005). Inside a student cohort: Teacher education from a social capital perspective. *Canadian Journal of Education/Revue canadienne de l'education*, 28(1/2),168-184.

McPherson, M., Smith-Lovin, L., & Cook, J. M. (2001). Birds of a feather: Homophily in social networks. *Annual Review of Sociology, 27*(1), 415-444.

Mills, C. (2009). Making sense of PSTs' dispositions towards social justice: can teacher education make a difference? *Critical Studies in Education, 50*(3), 277-288.

Mills, C., & Ballantyne, J. (2010). Pre-service teachers' dispositions towards diversity: Arguing for a developmental hierarchy of change. *Teaching and Teacher Education, 26*(3), 447-454.

Molm, L. D., Whitham, M. M., & Melamed, D. (2012). Forms of exchange and integrative bonds: Effects of history and embeddedness. *American Sociological Review, 77*(1), 141-165.

Noguera, P. A. (2001). Transforming urban schools through investments in the social capital of parents. *Psychology, 16*(1), 725-750.

Reagan, E. M., Chen, C., & Vernikoff, L. (2016). "Teachers are works in progress": A mixed methods study of teaching residents' beliefs and articulations of teaching for social justice. *Teaching and Teacher Education, 59*, 213-227.

Saldaña, J. (2015). *The coding manual for qualitative researchers*. Thousand Oaks, CA: Sage.

Wasserman, S., & Faust, K. (1994). *Social network analysis: Methods and applications* (Vol. 8). Cambridge, UK: Cambridge University Press.

Zeichner, K. M. (2009). *Teacher education and the struggle for social justice*. New York, NY: Routledge.

Appendix

Sociograms

Figure 1—*Close Relationship Network: Cohort Red (N = 36) and Cohort Blue (N = 41)*

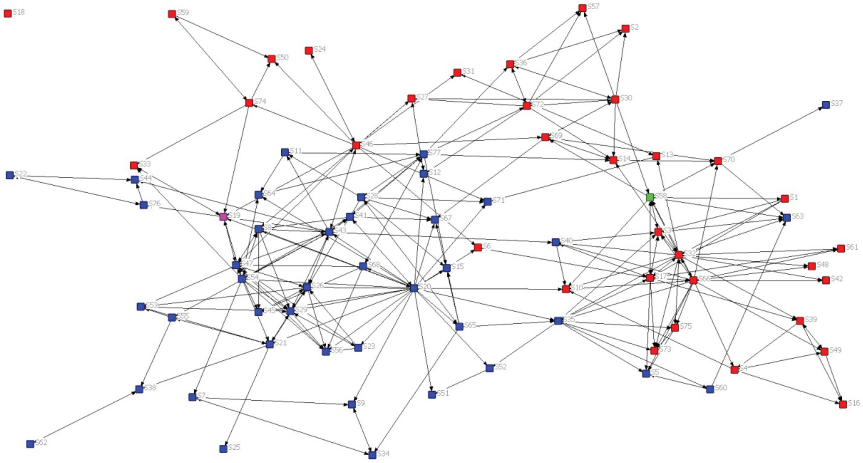


Figure 2—*Equity & Social Justice Network: Cohort Red (N = 36) and Cohort Blue (N = 41)*

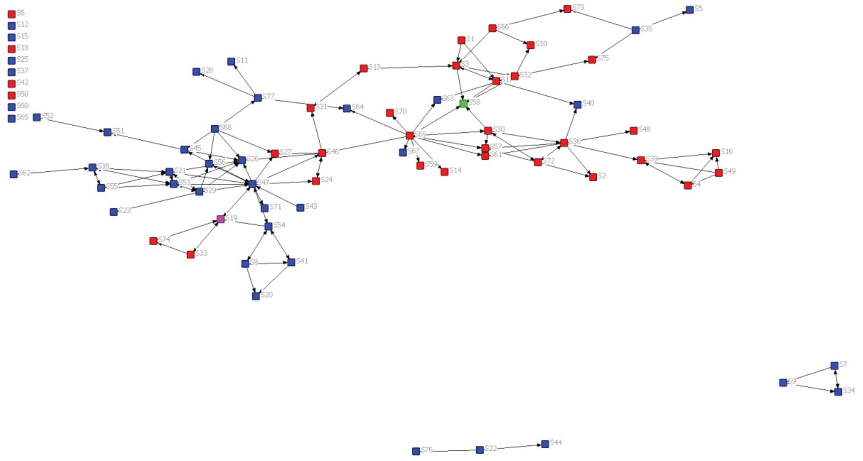


Figure 3—*Close Relationship and Equity Conversation Network Overlap*

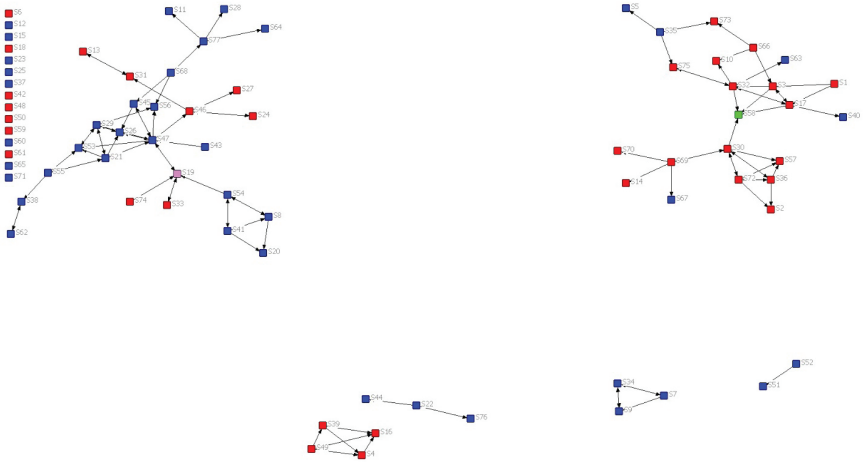
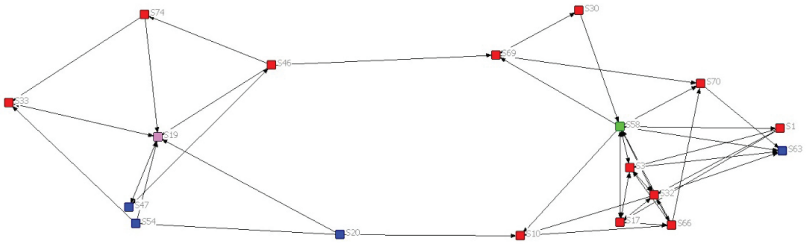


Figure 4—*S19 and S58 CRN networks*



Cohesion

Table 1

Cohesion - Tie Statistics (RR represents ties among members of the Red cohort; RB represents ties between a member of the Red Cohort seeking a relationship with a member of the Blue cohort; BR represents a tie between a member of the Blue cohort seeking a relationship with a member of the Red cohort; BB represents ties among members of the Blue co)

Network	Possible Ties- Whole Group	Possible Ties- Red	Possible Ties-Blue	RR	RB	BR	BB
Close Relationship	5852	1260	1640	102	24	19	131
Equity Conversations	5852	1260	1640	58	8	8	58
Close Relationship + Equity and	5852	1260	1640	47	4	5	46

Addressing Teacher Shortage

A Historical Policy Study on Teacher Credentialing in California

By Liza Mastrippolito

Introduction

Between 1910 and 1990, there was a balance of supply and demand of credentialed teachers for only 13% of the time (Hobart, 1992). The pendulum swung from overabundance of qualified teachers and little demand to times of serious shortage. Prior to the 1980s, waves of shortage were generally attributed to the effects of war or rapid population growth leading to increased school enrollment. In the 1990s, California started seeing new reasons for shortages, including attrition rates sky rocketing as the Baby Boomer generation began to retire (Hobart, 1992) and policy enactments that increased or decreased the need for teachers. The last century has witnessed an ebb and flow in the supply of teachers, and it would be meaningless to study this phenomenon without simultaneously studying state policies that were proposed and enacted throughout these same years (Hendrick, 2011).

While California once again finds itself in the midst of a teacher shortage crisis, school districts, teacher education programs, policy think tanks and research institutions, the California Commission on Teacher Credentialing (CTC), the

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California Department of Education (CDE), and the California State Legislature have all been looking for solutions. Shortage is not a new phenomenon, and even if it is successfully addressed and solved in the next few years, this will not be the last time that the state and the nation are faced with teacher shortages. Workforce supply and demand will always fluctuate, corresponding to real-time events occurring in society, the economy, the world, and politics. It was with this repeating cycle in mind that the study was designed. In order to address teacher shortage, we need to understand why it is happening because it is not always for the same reason, and the reasons will inform the solutions. We also need to ensure that our ways of addressing it do not undermine teacher quality or exacerbate inequity by allowing underprepared and even unqualified teachers into classrooms in patterns that disproportionately affect low-income communities of color.

It was with all of this in mind that a historical policy study was designed seeking to understand how educational policies enacted in California and at the federal level have affected the supply and demand of teachers. The study focused on answering the following three research questions:

1. How has policy regarding teacher credentialing developed in California since 1850?

2. What educational policies were enacted between the late 1980s and early 2000s, during California's last teacher shortage, and what connections can be found between specific policies and the supply and demand of the teacher workforce during that time?

3. How can an interpretive policy analysis of this time period inform current policies regarding teacher shortage?

Methodology

The aim in conducting the research in this historical policy study was to learn from policies that have been enacted in the state in the past. By analyzing California's policies in conjunction with data from the California Department of Education (CDE) and the California Commission on Teacher Credentialing (CTC), policies were identified that were successful, as well as policies that were less so, wherein success was measured in the policy's ability to achieve its initial and stated intent. This information created a lens through which to look at policies that have recently been proposed or enacted as we enter into the current teacher shortage. Based on an assessment of past and current policies, a set of recommendations were proposed for teacher preparation as well as future policy design in regard to teacher credentialing. While many researchers, policymakers, and educators propose solutions to the current growing shortage, there is a gap in the literature where these proposals are connected to past policies and practices based on an analysis of the data following their enactment. In short, the current knowledge base lacks sufficient assessment of the effectiveness of the policies enacted. This study sought to make these connections by analyzing historical and recent policy, practice, data, and outcomes.

In order to answer the research questions, the study sought to engage in an interpretive policy analysis of how we have approached credentialing in times of teacher shortage, specifically on how past shortages were dealt with at the policy level and how effective these policies were in terms of teacher recruitment and retention. An adaptation of Yanow's (2000) and Pigott's (2009) approaches to policy analysis and interpretation framed the methodology of this study. The study included, where possible, a comparative analysis of the corresponding data derived from the enacted policies. The purpose was to look for connections between the policy and the data on teacher credentialing, as well as on supply, retention rates, and teaching assignments. This analysis informed the formulation of a set of recommendations for decisions regarding certification and how we should approach teacher credentialing going forward. The intent was to analyze what we can learn from recurring cycles in the past in order to more effectively confront the shortage that we are currently facing.

The methodology for this study consisted of steps borrowed from a combination of sources. Yanow (2000) informed the study's approach to interpretive analysis. In addition to Yanow, Pigott (2009) outlined a series of steps to research synthesis and meta-analysis, and these steps have been adapted and used in conjunction with Yanow's interpretive approach. Pigott discussed a series of actions, and it is from these actions that the methodology for this research was constructed.

Steps 1 & 2: Mapping the Field and Problem Formulation

In adapting Yanow (2000) and Pigott's (2009) approach, six steps were designed. Although they were presented as steps, they did not always occur in chronological order, and often it was necessary to circle back and engage again in a particular step as new information was discovered. Step 1, to map the field, proposed to conduct background research, which included an extensive literature review of credentialing and policy proposals and enactments, as well as relevant data pertaining to them. Step 2, problem formulation, presented the issues relevant to teacher shortage, specifically how teacher preparation pathways may connect to retention and attrition. The intent in this step was to draw connections between policy and practice. This step primarily occurred in Chapter 2, which presented a literature review pertinent to shortage and the causes of shortage.

Steps 3 & 4: Data Collection and Evaluation

Step 3, data collection, occurred throughout the majority of this study, particularly in Chapters 4 through 7. Each chapter presented a different set of data, whether quantitative or qualitative, such as historical narrative data, literature review, or descriptions of policy proposals and enactments. Data connecting to the last shortage were presented in Chapter 6 to evaluate the effectiveness of these policies. Step 4, data evaluation, at its most literal sense occurs in this chapter, where

effectiveness is evaluated. Yet there was a less literal intent in this step as well, which included an evaluation of how policies were proposed and an attempt to understand the social and political context of policies. This happened primarily in Chapter 4, in which credentialing is presented through the lens of historical context.

Steps 5 & 6: Data Analysis and Interpretation and Recommendations

Step 5, data analysis and interpretation, began in Chapter 6 and continued through Chapters 7 and 8. This step sought to adapt Yanow's (2000) approach, which focused on interviews, observation, and document analysis. This study primarily applied the third of these steps and engaged in document and data analysis as it sought to evaluate policies in retrospect, after implementation, in order to make a set of recommendations for future policy. Step 6, recommendations, occurred at the end of Chapter 8, based on the entire history of relevant policy, evaluation of effectiveness, and interpretive analysis. The recommendations sought to identify future areas of focus in policy on teacher preparation and credentialing, as well as public education at large.

Findings

Historical Context

Chapter 4 focused on the first research question, charting the development of teacher education and certification in the state of California. Shortage was explored and factors that contributed to or caused it were outlined. They included a changing economy, a changing workforce—often in relation to the economy, immigration, population increases, declining interest in the profession, and sometimes even policy—such as in the class size reduction initiatives in 1996 (SB 1777, O'Connell, Chapter 163, Statutes of 1996). The literature found that solutions to teacher shortages focusing on recruiting often, if not always, involved lowering or relaxing standards and requirements, creating pathways that made it easier to enter the field. They included emergency credentials, credential waivers, and emergency permits, as well as fast tracks and intern options (Darling-Hammond, 2017; Darling-Hammond et al., 2016; Fitch & Tierney, 2011; Inglis, 2011a, 2011b). It was also found that low-income communities of color were often disproportionately affected by these solutions, as they were the ones consistently assigned under- or unprepared teachers (Darling-Hammond, 2017; Howard, 2003 Johnson & Birkeland, 2003; Johnson et al., 2005). In recognizing and naming this historical pattern, the intent was to next identify the exact policies that had addressed shortage, then analyze and evaluate these policies.

Addressing Shortage Through Policy

Through an extensive policy study of the last shortage in California, 35 bills

were identified that dealt with teacher education, credentialing, or retention. Each bill in fact referenced shortage in substantiating the need for the particular bill within the language of the bill. In reviewing the content of these bills, three distinct categories began to emerge. Toward the beginning of the shortage, the majority of the bills focused on the creation of alternative pathways to credentialing, including the expansion of university-based intern programs, district intern programs, emergency permits, credential waivers, fast tracks, as well as extended training for emergency permit holders.

The second category pertained to recruiting new teachers, whether that be brand new entrants to the field, retired teachers, paraprofessionals, military servicemen, existing teachers who were non-credentialed private school teachers, or teachers who were credentialed in other states. In addition to these specific recruitment efforts, an additional 11 bills focused on recruiting through financial assistance such as loan forgiveness programs like the Assumption Program of Loans for Education (APLE), and scholarships such as the Governor's Teaching Fellowship. Other financial incentives included expansion of the Cal Grant program to include aid specific for teacher education candidates in Cal Grant T and raising the minimum starting salaries for teachers in order to make the field more competitive.

The third and last category focused on increasing retention. Recognizing that creating pathways and recruiting new teachers were not enough and that in fact the leaking bucket needed to be slowed (Darling-Hammond, 2017; Darling-Hammond et al., 2018; Ingersoll & Smith, 2003), policymakers turned to ways of keeping existing teachers in the field. The largest and most far-reaching program in this category was the Beginning Teacher Assessment Program (BTSA), which supported and assessed new teachers to help ensure their growth and success in their first years, when burn out and attrition were most likely. The restructuring of the credential in California, creating a two-tiered credential that included a preliminary credential, and then the requirement to clear the credential through participation in induction, emphasized the importance of BTSA or other induction programs. Like the recruitment category, bills focusing on retention also had a financial subcategory. There were bonuses tied to teachers who committed to teaching in low-performing and hard-to-staff schools, bonuses for earning National Board Certification, as well as housing assistance and tax credits for teachers.

Policy Implications

Overall, data on participation in and credentialing through alternative pathways during the last shortage clearly indicated their effectiveness, especially in regard to recruiting more people into the field. University-based teacher education programs, including university-based intern programs, grew by 8.8% between 1997 and 2001, but the more substantial growth in terms of percentages occurred with district intern programs, which grew by 51%. In addition to meeting the goal of

increasing enrollment and credentialing, effectiveness could further be evaluated by examining retention rates of interns. Data revealed that 85% of university interns and 70% of district interns had become fully credentialed and were still teaching by the fourth year, a rate that was much higher than the national average, where close to 50% left by the same time (Reed et al., 2006). Nevertheless, not all alternative pathways experienced the same success. Emergency permits were widely issued, so in terms of recruiting people, they worked. Between 1995 and 2008, the state of California issued almost 300,000 emergency permits (CTC, 2000b, 2001a, 2012). By 1997, policymakers were already recognizing that emergency permitted teachers were receiving very little training and support and 35-40% of them were quitting after the first year.

Early on in the period of shortage being studied, the Paraprofessional Teacher Training Program (PTTP) was created as a recruitment strategy or career ladder for existing employees who worked in the classroom and thus already showed a commitment to the profession (SB 1636). Although slow to start, data revealed that completers of PTTP had a 98% retention rate once entering the field as teachers of record, a higher rate than any other program intending to recruit (CTC, 2006a, 2015b). In terms of financial incentives and assistance to support recruiting efforts, the APLE program was the largest and most expensive of the programs designed to recruit teachers to the field. Between 1986 and 2006, a total of 79,607 teachers were served, totaling $226,280,698 in loans forgiven (CSAC, 2006). The California Student Aid Commission (CSAC) found that 54% continued to teach in an identified shortage area for four or more years, and 72% taught for three or more years (CSAC, 2003a).

In the same way that the APLE program was the largest effort in recruiting through financial assistance, the BTSA program was by far the largest program created with the direct intent of increasing retention through supporting first-year teachers during their experience as new teachers and in improving their practice. Between BTSA's inception in 1995 and 2009, 284,752 new teachers had been provided services, with a total of $1.1 trillion invested in the effort (CTC, 2010a). In analyzing data from 128 BTSA programs across the state retention rates were high, with a mean of 92.71%. BTSA participants were also more likely to stay in economically disadvantaged settings than in wealthier areas, with an average of 94.94% retention among first-year teachers in low-income communities compared to 89.69% retention in low-poverty districts (Tushnet et al., 2002). Retention of BTSA completers continued to be studied by the CTC, and by 2008, it found that 94% were still teaching after two years and 87% were still teaching after five years (CTC, 2008). Compared to the national average of 40-50%, the difference was significant (CTC, 2010b).

Current Policies

The third research question sought to inform current policy in response to the

present teacher shortage through an interpretive analysis of policy enactments during the last shortage. In order to do so, it was necessary to first research the type of policies that have been proposed, and perhaps even enacted, this time around. California is only a few years into the present shortage, but predictions and discussion of the impending shortage, as well as policy proposals in response, began on a larger more focused scale in 2015-2016. Chapter 7 outlined the 25 bills that have been proposed or enacted in response to teacher shortage between 2016 and 2019. These bills aligned for the most part with the categories from the last shortage: pathways, recruitment, and retention.

Eight bills focused on creating alternative pathways to credentialing, five of which passed and were chaptered. These five bills focused on fast tracks into special education and bilingual education for teachers who had been credentialed out-of-state or who had private school experience. There were also bills that authorized the CTC to expedite the processing time for foreign teachers or those who were prepared out of state as well as spouses of active military personnel. The bills that did not pass were attempting to revive the emergency permit model, or the ability to extend the period that a substitute can teach in a special education classroom.

Ten bills focused on recruiting efforts. Of these, half of them sought to strengthen recruiting through expanding or reviving financial assistance programs, and the other half focused on recruiting specific populations such as paraprofessionals or community college candidates, set up career recruitment centers, or expand undergraduate and residency programs. The only one of these ten bills that passed was a controversial bill that authorized the establishment of a community college pilot program. None of the financial assistance bills passed.

The last seven bills focused on retention. Six of these addressed affordable housing for teachers, and the seventh proposed an above-the-line tax deduction for teachers which would lower their gross, taxable income. Only two of the housing assistance bills passed, and the tax deduction did not pass. One additional bill was enacted that focused on affordable housing for the workforce in California, which included teachers, yet the bill itself was not written specifically for teachers.

The Governor's Budget

While the majority of the 25 bills did not pass, some of the intent or action sought through their proposals did end up occurring through other means. Governor Brown's 2018-2019 budget for education included some very large allocations intended to address teacher shortage (Brown, 2018). Five-hundred and five million dollars were designated for professional development of current teachers and administrators in an effort to increase retention. These grants included the Educator Effectiveness Block Grant ($490 million), California Educator Development Grant ($10 million), and the Bilingual Educator Professional Development Grant ($5 million). To enrich recruiting efforts, the Classified School Employee Credentialing

Grant program was given a $45 million, one-time fund to support 2,250 classified employees seeking teaching certification, and the Integrated Teacher Preparation Program was allotted $10 million to be spent in developing and supporting concurrent undergraduate teacher education programs. SB 933 (Allen, 2016), the proposal to authorize and fund a new model for teacher education through residency programs did not pass the legislature, yet Governor Brown did make the decision to invest in the model in the 2019 budget. Two grant programs were created through the CTC, one being the Teacher Residency Grant Program, which was allotted $50 million to support school districts in creating local residency programs for special education teachers, as well as an additional $25 million for STEM and bilingual residents. The other grant was the Local Solutions Grant Program, which similarly allotted $50 million to provide one-time competitive grants to districts in order to address their shortage needs in special education.

Implications and Recommendations

The above summary of the study's findings is a very brief synopsis, and the entirety of the study and its implications are explored in much greater depth within the complete work. In addition to the policies studied during the last shortage, 25 bills that have been proposed or enacted during the current shortage in California were examined in Chapter 7 in order to identify patterns in approach to addressing teacher shortage. The research and findings from the study provided substantial quantitative and qualitative data that informed a total of 20 recommendations connected to teacher preparation and the profession. These 20 recommendations are similarly greatly expanded upon within the work, but they can be summarized into seven categories as presented below in Figure 1.

Discussion

It is interesting to observe how definitions and concepts change as research progresses. When initiating the study and writing the research questions, the author's understanding of shortage was as a concrete event occurring over a specific period of time. Similarly, policies addressing shortage and data on credentialing seemed to be straightforward. Research on the first question, concerning the history of teacher credentialing in California, was in fact straightforward, and resources and literature were easily found and plentiful. When moving on to the second question, beginning with a deep dive into policy enactments and searching assembly and senate bills, the research encountered the first of many complications and road blocks. This continued as data was sought that would connect to policy enactments with assessments of their effectiveness. There was a misconception going into the study that this information would already be compiled somewhere and readily available, and that the work would simply entail analyzing it. It made sense to think that the CTC or the CDE—or especially the legislature—tracked policy enactments and

Figure 1

Summary of Recommendations

A New Alternative Pathway: The Residency Model

- The state should continue to fund residency programs.
- The state should require districts to pay residents for required resident work

Focus on Retention

- Districts should be required to offer induction in first two years of teaching.
- Districts should expand support of all new teachers (including non-credentialed).
- Districts and unions should collaborate on requirements for new teacher support programs.
- Teacher education programs and districts should collaborate regularly to ensure new teachers are starting with necessary skills and meeting the needs of the field.

Compensation and Housing

- Compensation should be increased in order to make teaching salaries competitive with other fields requiring comparable education.
- Salaries should be tied to cost of living increases within proximity to school.
- Districts should continue to build and provide quality affordable housing for new teachers, to help attract them to the district, as well as to retain them.
- The state should provide home purchasing assistance, particularly in the form of low-cost loans, and assistance with down payments.
- The state should increase/expand tax credits for teachers.

Cost of Teacher Preparation

- The state should revive loan assumption and scholarship/grant programs.
- The state should subsidize the cost of teacher education in high-need areas during teacher shortage.
- The state should compensate for the required 600 hours of student teaching.

Investing in Public Education

- The state should prioritize the allocation of sufficient funding to allow for safe and high-quality schools, including facilities and resources.
- School leadership must engage directly with teachers to find solutions to local issues within each individual site and district that teachers feel lead to frustration and burn out.
- Administrators need continued training and directives to engage in a transformative leadership style that involves the entire school community and empowers teachers to co-construct the educational environment.

Statewide Database to Track and Understand the Field

- A comprehensive state-wide initiative to track candidates as they leave their teacher preparation program and move through their career should be built in order to improve our ability to understand the needs and realities of the field.
- The state should create its own version of the Schools and Staffing Survey conducted by the National Center for Education Statistics (NCES), as well as exit survey for those who leave their position.

Evaluation of Legislation

- All policies that enact programs or initiatives should be reported upon and evaluated, beyond the dates of participation in the program.

evaluated their effectiveness and made this information readily available to the general public. This was not always the case. There was a gap in the literature on educational policy. Certain policies have of course been researched and written about, such as SB 1422 (Bergeson, Chapter 1245, Statutes of 1992), which initiated the BTSA program. There is extensive literature and data available discussing and evaluating SB 1422. Other policies, especially the ones focusing on financial assistance and raising salaries, had been researched very little, especially on a longitudinal basis that extended beyond the requirements of the bill.

Despite the difficulties that arose throughout the research process and the extended time that was needed to ensure that the study had been thorough, the information gathered and compiled into this study is comprehensive and provides a reference that was previously unavailable. In this way, the research filled a gap by gathering data from hundreds of files, reports, databases, documents, evaluations, and search engines. Even though this was not the initial intent of the study, it provides a new resource in the field, while also answering the research questions and providing a clear understanding of credentialing in California, policy enactments during the last shortage, and discussion and analysis of their effectiveness.

Note

The complete work can be read here:

Mastrippolito, L.M. (2019). *Addressing teacher shortage: A Historical policy study on teacher credentialing in California*. (Accession No. 887) [Doctoral dissertation, Loyola Marymount University, Los Angeles]. ProQuest Dissertations Publishing. https://digitalcommons.lmu.edu/cgi/viewcontent.cgi?article=1889&context=etd

References

Brown, J. (2018). *Governor's budget summary: 2018-2019*. Sacramento, CA: California Department of Finance. Retrieved from http://www.ebudget.ca.gov/2018-19/pdf/BudgetSummary/K-12Education.pdf

California Commission on Teacher Credentialing. (2000b). *Data terms glossary*. Retrieved from https://www.ctc.ca.gov/commission/reports/data/data-terms-glossary

California Commission on Teacher Credentialing. (2001a). *Annual report*. Sacramento, CA: Author.

California Commission on Teacher Credentialing. (2006a). *Paraprofessional training program: A progress report to the legislature*. Sacramento, CA: Author.

California Commission on Teacher Credentialing. (2008). *BTSA retention*. Sacramento, CA: Author. Retrieved from: https://www.ctc.ca.gov/docs/default-source/educator-prep/statistics/2008-12-stat.pdf

California Commission on Teacher Credentialing. (2010a). *Professional services committee: Update on BTSA*. Sacramento, CA: Author. Retrieved from: https://www.ctc.ca.gov/docs/default-source/commission/agendas/2010-09/2010-09-2g-pdf

California Commission on Teacher Credentialing. (2010b). *Teacher supply in California: A report to the legislature*. Sacramento, CA: Author.

California Commission on Teacher Credentialing. (2011). *A history of policies and forces shaping California teacher credentialing*. Sacramento, CA: Author.

California Commission on Teacher Credentialing. (2012). *Agenda Item 5B. Credentialing and certificated assignments: Committee authorizations and certificated assignments in California*. Sacramento, CA: Author. Retrieved from https://www.ctc.ca.gov/docs/default-source/commission/agendas/2012-06/2012-06-5b-pdf.pdf

California Commission on Teacher Credentialing. (2015b). *Report on new teacher induction.* Sacramento, CA: Author. Retrieved from http://www.ctc.ca.gov/reports/new-teacher-induction-2015.pdf

California Student Aid Commission. (2003a). *2002-2003 Assumption program of loans for education (APLE) report to the legislature*. Sacramento, CA: Author.

California Student Aid Commission. (2006). *2005-2006 Assumption program of loans for education (APLE) report to the legislature*. Sacramento, CA: Author.

Darling-Hammond, L. (2017, September 19). *Understanding teacher turnover: Why it matters and what we can do about it* [Video file]. Retrieved from https://learningpolicyinstitute.org/event/understanding-teacher-turnover

Darling-Hammond, L. (2018, May 23). Fix California's shortage of qualified teachers, or B Brown's school reforms will fail. *Sacramento Bee*. Retrieved from https://www.sacbee.com/opinion/california-forum/article211712349.html

Darling-Hammond, L., Furger, R., Shields, P., & Sutcher, L. (2016). *Addressing California's emerging teacher shortage: An analysis of sources and solutions*. Palo Alto, CA: Learning Policy Institute. Retrieved from https://www.learningpolicyinstitute.org/addressing-ca-teacher-shortage

Darling-Hammond, L., LaFors, J., & Snyder, J. (2001). Educating teachers for California's future. *Teacher Education Quarterly, 28*(1), 9–55.

Darling-Hammond, L., Sutcher, L., & Carver-Thomas, D. (2018). *Teacher shortages in California: Status, sources, and potential solutions*. Palo Alto, CA: Learning Policy Institute.

Fitch, P., & Tierney, D. (2011). Fulfilling the California promise. In *A history of policies and forces shaping California teacher credentialing*. Sacramento, CA: California Commission on Teacher Credentialing.

Hendrick, I. (2011). California's first 100 years: Establishing state responsibility for quality teachers. In *A history of policies and forces shaping California teacher credentialing* (pp. 17-31). Sacramento, CA: California Commission on Teacher Credentialing.

Hobart, B. (1992). *Teacher shortages and the standards of teacher certification in the state of California* (Doctoral dissertation). Retrieved from ProQuest Dissertations Publishing. (9304838).

Howard, T. C. (2003). Who receives the short end of the shortage? Implications of the U.S. teacher shortage on urban schools. *Journal of Curriculum and Supervision, 18*(2), 142-160. Retrieved from https://eric.ed.gov/?id=EJ660835

Ingersoll, R. (1995). *Teacher supply, teacher qualifications, and teacher turnover in the United States: 1990-91* (NCES Report No. 95-74). Washington, DC: U.S. Department of Education, National Center for Education Statistics.

Ingersoll, R. (2001). Teacher turnover, teacher shortages, and the organization of schools. *American Education Research Journal, 38*(3), 499-534. Retrieved from https://repository.upenn.edu/gse_pubs/94

Ingersoll, R., Merrill, L., & May, H. (2012). Retaining teachers: How preparation matters. *Educational Leadership, 69*(8), 30–34.

Ingersoll, R., & Smith, T. M. (2003). The wrong solution to the teacher shortage. *Educational Leadership, 60*(8), 30-33.

Inglis, S. (2011a). A political firestorm surrounds the Fisher credential reform (1950-1961). In *A history of policies and forces shaping California teacher credentialing* (pp. 32-57). Sacramento, CA: California Commission on Teacher Credentialing.

Inglis, S. (2011b). Development of the Ryan credential reforms. In *A history of policies and forces shaping California teacher credentialing* (pp. 97-147). Sacramento, CA: Commission on Teacher Credentialing.

Johnson, S., Berg, J., & Donaldson, M. (2005). *Who stays in teaching and why: A review of the literature on teacher retention*. Cambridge, MA: Harvard Graduate School of Education.

Johnson, S., & Birkeland, S. (2003). Pursuing a "sense of success": New teachers explain their career decisions. *American Educational Research Journal, 40*(3), 581-617.

Pigott, T. (2009). Research synthesis and educational policy. In G. Sykes, B. Schneider, D. Plank, & T. Ford (Eds.), *Handbook of education policy research* (pp. 154-162). New York, NY: Routledge.

Reed, D., Rueben, K., & Barbour, E. (2006). *Retention of new teachers in California*. San Francisco, CA: Public Policy Institute of California.

Tushnet, N., Briggs, D., Elliot, J., Esch, C., Haviland, D., Humphrey, D., . . . Young, V. (2002). *Final report of the independent evaluation of the Beginning Teacher Support and Assessment program (BTSA)*. San Francisco, CA: West Ed. Retrieved from: https://www.ctc.ca.gov/docs/default-source/commission/reports/btsa-eval-2003-complete.pdf?sfvrsn=0

Yanow, D. (2000). *Conducting interpretive policy analysis*. Thousand Oaks, CA: Sage.

Novice Teacher Attrition

Implications for Teacher Education

By Heather Michel

Introduction

> I heard somebody say once, "My gosh, the kids nowadays and their behavior!" I can't imagine in forty years what it will be like, feral children just coming in. "You have parents, is anybody teaching you anything at home?" There are some years where I think, "Does anybody talk to you at home?" So, I'm thinking in forty years, "Oh man, I got to get to plan B or I don't know if I can do it."
>
> —Eden, interview participant

The attrition rate of novice teachers is a valid concern for public education. Some studies have found that within the first five years of teaching 40-50% of novice teachers will leave the teaching profession (Ingersoll & Smith, 2003; Neason, 2014). This number is startling and is cause for concern for many reasons. First, novice teacher turnover affects student achievement (Barnes, Crowe, & Schaefer, 2007). When novice teachers leave a school, schools scramble to fill their vacancies. Teachers with less experience and instructional knowledge usually fill these positions (Barnes, Crowe, & Schaefer, 2007). Second, novice teacher attrition creates an older age profile of those teachers that remain in teaching and lowers school

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morale (MacDonald, 1999). This is especially true for at risk schools that have an exceptionally high rate of teacher turnover (Barnes, Crowe, & Schaefer, 2007). Finally, the cost of teacher attrition is staggering (Barnes, Crowe, & Schaefer, 2007). The low and high estimate for teacher attrition in California alone is estimated to be between $81,960,046 and $178,396,884 dollars (Alliance for Excellent Education, 2014). Concerns about novice teacher turnover have supported a large body of research that explores the reasons behind novice teacher attrition (Ingersoll & Smith, 2003; Evans & Tribble, 1986; Smith, 2007; Shen, 1997). Because novice teacher retention is such a key component of school and student success, it deserves further discussion drawing on two key stakeholders: teacher preparation programs and the permanent teaching context itself.

Novice Teacher Commitment in the Permanent Teaching Context

There is considerable research that substantiates how teacher commitment to the profession is fostered once a novice teacher has been placed in a permanent teaching position. For example, Weiss (1999) found in a study done with first year teachers that occupational support in the form of teacher collaboration, teacher mentoring, and participation in decision-making led to a higher level of first year teacher commitment. Rosenholtz (1991) adds five more factors to Weiss's list of workplace commitment factors. Rosenholtz's factors include psychic rewards, managing student behavior, task autonomy, teaching learning communities, and teacher certainty.

Novice Teacher Commitment and Teacher Education Programs

Novice teacher commitment has traditionally been studied after new teachers have secured a permanent teaching position, however there is evidence that professional commitment begins as early as the first year of teacher preparation. Jarvis-Selinger, Pratt and Collins (2010) used qualitative methods to study 23 participants and found that teacher candidates were either reaffirmed in their commitment to become a teacher or that the teacher education experience "moved them away from" their initial commitment to the teaching profession (p. 89). The Jarvis-Selinger et al. study indicates that novice teachers either arrive to teacher preparation programs already committed to teaching or that teacher candidates experience teacher preparation in a way that diminishes their commitment to the profession. In both instances, teacher preparation programs played a central role in novice teacher commitment.

Once teacher candidates leave the teacher education context and secure a job, novice teachers do not directly refer to their teacher preparation as justification for leaving the profession, however they have made reference to feeling ineffective and being ill-prepared to manage the multiple needs of their students (Johnson & Birkeland, 2003; Flores & Day, 2006). The disconnect between teacher prepara-

tion programs and a novice teacher's first teaching experiences is well documented (Darling-Hammond, Hammerness, Grossman, & Shulman, 2006; Flores & Day, 2006). Indeed, measurable skills that focus on theory, content knowledge, and subject matter are the norm in most teacher preparation programs (Kagan, 1992, Darling-Hammond, 2006). A focus on professional commitment would necessitate time for reflection and identity development—peripheral activities in most teacher education programs (Walkington, 2005).

Novice teacher identity and teacher education. Flores and Day (2006) define novice teacher identity as an "ongoing and dynamic process" that includes a constant reinterpretation of ones' values, beliefs, and experiences (p.220). Although, not an articulated focus for most teacher preparation programs, teacher candidates begin to construct an evolving teacher identity as they move through teacher education course work, practicum, and credentialing requirements (Sexton, 2008; Hong, Greene, Roberson, Francis, & Keenen, 2017). These beginning teacher experiences are filtered through their past personal K-12 educational experiences to create a distinctive teacher identity for each teacher candidate (Rex & Nelson, 2004). There is evidence that novice teacher identity and commitment are related and serve as crucial components to novice teacher development. After creating a commitment by identity matrix to study their relationship, Jarvis-Selinger et al. (2010) found identity and commitment to be highly related however, this relationship was unique for each candidate. In general terms, by the end of the program, teacher candidates had more "positive perception of their teaching identity" but were overall less committed to finding a full-time teaching position (Jarvis-Selinger et al. 2010, p. 89). This research implies that there is an authenticated relationship between teacher identity and novice teacher commitment.

Novice teacher purpose and teacher education. Novice teacher identity and purpose are closely related, however they are not discussed in tandem in teacher education literature. Purpose is often discussed in terms of career choice, teaching career motivations, or career optimism (McLean, Taylor, & Jimenez, 2019; McLennan, McIlveen & Perera, 2017). Although related to motivation, an alternative definition for teacher purpose that suites the focus of this study is presented by Damon (2009). Damon posits that "purpose is a stable and generalized intention to accomplish something that is at the same time meaningful to the self and consequential to the world and beyond the self" (p.33). This definition suggests that purpose provides a sense of meaning, motivation, and resilience as one works towards their goals (Krzesni, 2015). The lack of research regarding teacher purpose indicates further investigation in this area is needed.

In terms of career choice motivation and novice teacher retention McLean, Taylor, and Jimenez (2019) conducted a study that explored career choice motivations as predictors of novice teacher burnout or career optimism. They found that participant perception of their own teaching ability and genuine interest in and

excitement about teaching were related to less burnout and more optimism for the teaching profession. Although not directly related, a relationship can be drawn between career choice motivation and teacher purpose. The research related to career motivation and early teaching experiences supports the claim that developing novice teacher purpose within the context of teacher education would impact teacher attrition in positive ways.

The literature that explores novice teachers' pre-and early teaching experiences, beliefs, and commitment to the profession sheds further light on the novice teacher experience and the complexity that supports a novice teacher's decision to stay or leave the teaching profession. The literature indicates that teacher education programs have the potential to play in instrumental role in novice teacher commitment through the development of teacher candidate purpose and identity before entry into the profession.

Method

This mixed methods study explored novice teachers' beliefs and experiences in order to better understand their commitment to the teaching profession. The research question that guides this exploration is:

> How do novice teachers talk about their commitment to the profession and is their commitment related to their beliefs and pre and in-service teaching experiences?

Participants

This study took place in a Southern California school district and elicited participation from 45 elementary schools. All survey participants (n=30) were women, working an average of three years as a full-time teacher. The majority (83%, n=25) taught in English only classrooms, with five (17%) taught in dual immersion classrooms teaching in Spanish 95% of their day. A third of teachers (37%, n=11) taught within a moderately low Social Economic Status (SES) school. In regard to pre-teaching experiences, about half (53%) received their credential from a local state school that included a four-year college program that cumulated in a fifth year of study during which they completed their student teaching and received their certification.

Interview participants (n=10) were selected based on commitment scores, number of years teaching, and SES levels of current school. Many of the interview participants were finishing up their fifth year of teaching, while only 3 participants had been teaching for two years or less. The interview participants were divided equally in terms of Dual Immersion and English Only teachers; likewise, they were divided evenly in terms of the SES level of their school. Pre-teaching experiences matched that of the larger survey sample.

Data Collection Tools

Three methods of data collection were used to address the research question: a participant survey, qualitative interviews and publicly available testing data and school affiliated documents. The Novice Teacher Survey was administered digitally through district e-mail. The Survey (NTS) consisted of two components: a demographic questionnaire and nine questions regarding commitment toward the teaching profession. From the NTS, ten novice teachers volunteered and agreed to participate in one-on-one semi-structured interviews. The interview consisted of 14 guiding questions and usually lasted about an hour and a half. The guiding questions explored their personal experiences, their teacher preparation experiences, their feelings effectiveness in relation to their practice, and their commitment to the profession. The review of Secondary Archival Data included the SARC data for each school (School Accountability Report Card), individual school websites, district websites that profile each school, and school generated documents such as newsletters and parent letters.

Findings

The research question that supported this study asks, "How do novice teachers talk about their commitment to the teaching profession? And what kinds of beliefs and experiences are related to their commitment to the profession?" An ANOVA conducted on the NTS scores and pre-teaching experiences indicate that there were no significant group differences in commitment ($F(3, 29) = .60$, $p > .05$) scores based on the type of university where the credential was received. Additionally, there were no statistically significant group differences in commitment ($F(2, 29) = .28$, $p > .05$) scores based on the type of credential program. Although, novice teacher commitment did not materialize as a salient variable in the NTS, the NTIs indicate a more complex relationship between commitment, beliefs and experiences.

Commitment to the Teaching Profession

When looking at all ten transcripts the most common way the participants discussed their commitment to the profession was in terms of their passion for teaching and learning. Eighty percent of the participants made comments such as, "I don't see myself doing anything else," or "I don't really feel like I'm going to a job. It's like a passion." They recognized that teaching was a challenge at times and to make it through these challenges, passion and love for the profession is needed. These positive comments support the argument that the more passionate a novice teacher is about teaching, the more committed they would be to the teaching profession. When applying this argument to the four novice teacher demographics, dual immersion and English only teachers and low and moderately high SES schools, important trends emerge. Number of years teaching, and credential pathways did not play a definitive role in this finding.

When looking at the Dual Immersion and English Only teacher groups, the Dual Immersion teachers made more comments about their passion for teaching than the English Only teachers. Out of the sixteen comments made, eleven of them came from Dual Immersion teachers. In regard to high and moderately low SES school groups, the participants working within a moderately low SES context made more references to their passion and enjoyment of teaching. Of the 16 comments made, teachers working in moderately low SES status schools made ten. This finding suggests that novice teachers working at moderately low SES schools are more passionate about teaching and thus more committed to the teaching profession. Previous literature that discusses moderately low SES schools (Jacob, 2007) states that they typically experience higher levels of teacher attrition and more teacher movement to better performing or more affluent schools. This was not the case for the participants in this study. They were passionate about their teaching and seemed even more passionate about affecting the lives of their students. Vianney captures this sentiment well when she says, "I feel like I'm good on top of all those things that I said, I still feel like I'm good at what I do. I enjoy learning more about what I do. There's so much room for growth. I love affecting kids, helping them out, helping them get to their 'a-ha' moments."

Emergent Findings

Both a qualitative and quantitative analysis demonstrated that teacher education programs demonstrated minimal impact on teacher beliefs and commitment to the profession. The NTS scores and pre-teaching experiences indicate that there were no significant group differences in commitment scores based on the type of university where the credential was received or the type of the credential program.

The interview data further suggests that teacher education program experience did not support significant feelings of effectiveness, commitment to the profession or beliefs about teaching. Of the 22 comments made about teacher education experiences in relation to novice teacher commitment, only 5 (22%) comments were directed to the value or effectiveness of their teacher education program. Three out of ten teachers commented on how their teacher education program and their student teaching experience helped them address the challenges they faced in their first year of teaching. When the remaining seven participants were asked directly about how their pre-teaching education experiences may have aided them, the teachers that made no reference to their pre-teaching education said that their teacher education lacked real world application.

Discussion and Conclusions

Dual immersion teachers were the outliers among the participants in this study. Their interview data indicated the highest levels of efficacy and commitment to the profession and belief systems that supported a social justice component and an

understanding that teaching was largely about inspiring and empowering students. One explanation for this exception is the alignment between their personal experiences, positive teacher education experiences, teaching context, and the strong sense of purpose they brought to the teaching profession. Although they experienced the same teaching challenges as their mono-lingual counterparts, they expressed an explicit purpose for becoming a teacher and this further supported their feelings of effectiveness, commitment to the profession, and positive beliefs about teaching.

The dual immersion teachers in this study highlight the importance of identity formation and purpose driven practice among novice teachers. Opportunities for reflection at key points in teacher preparation programs where students can take stock of their evolving teacher identity and future commitment to the profession would bolster novice teacher commitment once in permanent teaching positions. Additionally, the field experiences that are ubiquitous in teacher preparation programs would be an ideal opportunity to initiate an intentional focus on teacher identity formation and purpose. Currently, field experiences are habitually focused on novice teacher socialization and "functional competence," (Walkington, 2005, p. 56). This missed opportunity is critical because novice teacher identity formation begins with student teaching experiences and continues once novice teachers attain a permanent teaching position (Gratch, 2000; Jarvis-Selinger et al., 2010; Walkington, 2005).

Novice teacher attrition continues to be a national concern for public education (Alliance for Excellent Education, 2014). The impact it has on students, schools, and districts merits an exhaustive exploration of possible solutions. This study offers a plausible answer that is not bound by fund allocation or public-school administrative policies. A focus on identity formation and teaching purpose in teacher preparation programs would entail a change in teacher preparation pedagogy and would capitalize on current structures within teacher preparation. Novice teacher attrition cannot be addressed by one stakeholder alone. It will take the combined efforts of both public education and teacher preparation programs to effectively address this issue.

References

Alliance for Excellent Education. (2014). *On the path to equity: Improving the effectiveness of beginning teachers* (All4Ed). Retrieved from: https://mk0all4edorgjxiy8xf9.kinstacdn.com/wp-content/uploads/2014/07/PathToEquity.pdf

Barnes, G., Crowe, E., & Schaefer, B. (2007). *The cost of teacher turnover in five school districts: A pilot study*. Washington, DC: National Commission on Teaching and America's Future.

Damon, W. (2009). *The path to purpose: How young people find their calling in life*. New York, NY: Fresh Press

Darling-Hammond, L., Hammerness, K., Hammerness, P., Rust, F., & Shulman, L. (2007). *The design of teacher education programs*. San Francisco, CA: Jossey-Bass

Flores, M. F. & Day, C. (2006). Contexts which shape and reshape new teachers' identities: A multi-perspective study. *Teaching and Teacher Education, 22*, 219-232

Gratch, A. (2000). Becoming teacher: Student teaching as identity construction. *Teaching Education, 11*(1), 119-126, DOI: 10.1080/10476210050020435

Hong, J., Greene, B., Robin, R., Dionne, C. F., Keenen, L. R. (2018). Variations in pre-service teachers' career exploration and commitment to teaching. *Teacher Development, 22*(3), 408-426.

Ingersoll, R., & Smith, T. (2003). The wrong solution to the teacher shortage. *Educational Leadership, 60*, 30-33.

Jacob, B. A. (2007). The challenges of staffing urban schools with effective teachers. *The Future of Children, 17*, 129-153.

Jarvis-Selinger, S., Pratt, D., & Collins, J. (2010). Journeys toward becoming a teacher: Charting the course of professional development. *Teacher Education Quarterly, 37*(2), 69-95. Retrieved April 2, 2020, from www.jstor.org/stable/23479590

Johnson, S. M., & Birkeland, S. E. (2003). Pursuing a "sense of success": New teachers explain their career decisions. *American Educational Research Journal, 40*, 581-617.

Kagan, D. M. (1992). Professional growth among Preservice and beginning teachers. *American Educational Research Association, 62*(2), 129-169

Krzesni, D., (2015). Pedagogy of purpose. *Counterpoints, 503*, 173-183

MacDonald, D. (1999). Teacher attrition: A review of the literature. *Teaching and Teacher Education, 15*, 835-848.

McLean, L., Taylor, M., Jimenez, M., (2019). Career choice motivations in teacher training as predictors of burnout and career optimism in the first year of teaching. *Teaching and Teacher Education, 85*, 204-214

McLennan, B., McIlveen, P., & Perera, H.N. (2017). Pre-Service teachers' self-efficacy mediates the relationship between career adaptability and career optimism. *Teaching and Teacher Education, 63*, 176-185

Neason, A. (2014). *Half of teachers leave the job after five years. Here's what to do about it*. Retrieved from https://hechingerreport.org/half-teachers-leave-job-five-years-heres/

Rosenholtz, S. J. (1991). *Teacher's workplace: The social organization of schools*. New York, NY: Teachers College Press.

Rex, L. A., Nelson, M. C., (2004). How teachers' professional identities position high-stakes test preparation in their classrooms. *Teacher College Record, 106*(6) 1288-1331

Sexton, D.M. (2008). Student teachers negotiate identity, role, and agency. *Teacher Education Quarterly, 35*(3), 73-88

Shen, J. (1997). Teacher retention and attrition in public schools: Evidence from SASS91. *The Journal of Educational Research, 91*, 81-88.

Smith, T. M. (2007). How do state-level induction and standards-based reform policies affect induction experiences and turnover among new teachers? *American Journal of Education, 113* 273-309.

Walkington, J. (2005). Becoming a teacher: Encouraging development of teacher identity through reflective practice. *Asia-Pacific Journal of Teacher Education, 33*(1), 53-64.

Weiss, M. E. (1999). Perceived workplace conditions and first-year teachers' morale, career choice commitment, and planned retention: A secondary analysis. *Teaching and Teacher Education, 15*, 861-879.

Flores, M. F. & Day, C. (2006). Contexts which shape and reshape new teachers' identities: A multi-perspective study. *Teaching and Teacher Education, 22*, 219-232

Gratch, A. (2000). Becoming teacher: Student teaching as identity construction. *Teaching Education, 11*(1), 119-126, DOI: 10.1080/10476210050020435

Hong, J., Greene, B., Robin, R., Dionne, C. F., Keenen, L. R. (2018). Variations in pre-service teachers' career exploration and commitment to teaching. *Teacher Development, 22*(3), 408-426.

Ingersoll, R., & Smith, T. (2003). The wrong solution to the teacher shortage. *Educational Leadership, 60*, 30-33.

Jacob, B. A. (2007). The challenges of staffing urban schools with effective teachers. *The Future of Children, 17*, 129-153.

Jarvis-Selinger, S., Pratt, D., & Collins, J. (2010). Journeys toward becoming a teacher: Charting the course of professional development. *Teacher Education Quarterly, 37*(2), 69-95. Retrieved April 2, 2020, from www.jstor.org/stable/23479590

Johnson, S. M., & Birkeland, S. E. (2003). Pursuing a "sense of success": New teachers explain their career decisions. *American Educational Research Journal, 40*, 581-617.

Kagan, D. M. (1992). Professional growth among Preservice and beginning teachers. *American Educational Research Association, 62*(2), 129-169

Krzesni, D., (2015). Pedagogy of purpose. *Counterpoints, 503*, 173-183

MacDonald, D. (1999). Teacher attrition: A review of the literature. *Teaching and Teacher Education, 15*, 835-848.

McLean, L., Taylor, M., Jimenez, M., (2019). Career choice motivations in teacher training as predictors of burnout and career optimism in the first year of teaching. *Teaching and Teacher Education, 85*, 204-214

McLennan, B., McIlveen, P., & Perera, H.N. (2017). Pre-Service teachers' self-efficacy mediates the relationship between career adaptability and career optimism. *Teaching and Teacher Education, 63*, 176-185

Neason, A. (2014). *Half of teachers leave the job after five years. Here's what to do about it*. Retrieved from https://hechingerreport.org/half-teachers-leave-job-five-years-heres/

Rosenholtz, S. J. (1991). *Teacher's workplace: The social organization of schools*. New York, NY: Teachers College Press.

Rex, L. A., Nelson, M. C., (2004). How teachers' professional identities position high-stakes test preparation in their classrooms. *Teacher College Record, 106*(6) 1288-1331

Sexton, D.M. (2008). Student teachers negotiate identity, role, and agency. *Teacher Education Quarterly, 35*(3), 73-88

Shen, J. (1997). Teacher retention and attrition in public schools: Evidence from SASS91. *The Journal of Educational Research, 91*, 81-88.

Smith, T. M. (2007). How do state-level induction and standards-based reform policies affect induction experiences and turnover among new teachers? *American Journal of Education, 113* 273-309.

Walkington, J. (2005). Becoming a teacher: Encouraging development of teacher identity through reflective practice. *Asia-Pacific Journal of Teacher Education, 33*(1), 53-64.

Weiss, M. E. (1999). Perceived workplace conditions and first-year teachers' morale, career choice commitment, and planned retention: A secondary analysis. *Teaching and Teacher Education, 15*, 861-879.

Social Justice in Teacher Education

It's Not Just a Course

By Mary Candace Raygoza, Raina León, Clifford Lee, Christopher Junsay, Aaminah Norris, & Gemma Niermann

Overview of Practice

Across the state and nation, the need for teachers is pronounced, particularly those who are curriculum designers, skilled educational leaders, and community organizers informed by social justice frameworks and sound transformational methods (Darling-Hammond, 2015; Duncan-Andrade, 2009; Farinde-Wu, 2018; Picower, 2015; Ware, 2006). Schools need educators who are trained to draw upon students' community assets to develop students' academic success, cultural competence, and sociopolitical consciousness by connecting curricular content to students' cultural understanding and real-world problem solving (Howell, Norris, & Williams, 2019; Ladson-Billings, 2006; Yosso, 2005). Teachers are increasingly

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called upon to develop network hubs within communities. Unfortunately, teachers often burn out because they do not learn how to draw on support networks and develop resiliency.

Teaching is a political act (Nieto, 2003). We see the reform of our secondary teacher education program within the landscape of teacher education as a political act. For the past six years, faculty and staff from the Single Subject Teacher Education (SSTE) program at Saint Mary's College of California have worked to revitalize curricula and field experiences in close relationship with the current needs of urban schools. We made significant changes, including learning objectives with bold social justice visioning that are housed within all of the program courses.

The SSTE team reviewed all of the syllabi within the curricula with a targeted protocol to guide incisive analysis, discussion, and revision. We also redesigned field experiences to extend to full year placements, with multiple student teachers immersed in cohesive teams; the application process to learn about prospective students' cultural humility; and lesson templates to incorporate explicit questioning of social justice paradigms. We invite candidates to engage in interdisciplinary lesson and unit design practices; push them to explicitly plan for the use of community circles within a restorative justice framework; and integrate mindfulness practices.

Since our long term goal is to see the vision of a secondary teacher education program rooted in social justice, the redesign of the SSTE program is constantly being refined. Thus, we constantly engage in praxis to discuss the processes, successes, and barriers when redesigning a teacher education program to focus on social change. The purpose of this paper is to share the community vision that we have established and extend the practice with others.

Objectives of the Paper

The objectives of this paper are to describe and ignite critical dialogue and mobilize around the following four facets of social justice teacher education program design, rooted in our collective experience transforming the SMC SSTE program:

- social justice teacher education core principles,
- student screening and early foundations for social justice teaching,
- social justice-oriented courses,
- and field placements to move social justice teaching theory to practice.

Ultimately, we seek to engage teacher educators, legislators, staffers, and other policymakers in interrogating how preparing teachers for a more socially just world entails bringing a social justice lens to all program facets and cannot be fully addressed within the confines of one course or program component. Furthermore, another goal of this paper is to network and build community and solidarity with those who have a vested interest in envisioning the purpose of urban teacher education to prepare transformative social justice change agents to teach in traditionally marginalized communities.

Key Elements of Practice

(1) Social Justice Teaching Core Principles

The SSTE team developed two documents that capture the core principles guiding our work. The SSTE Transformative Educator Inventory (see Appendix A) embodies a set of characteristics and dispositions that have been found in successful, effective, and transformative teacher leaders. We introduce the inventory to students in their first course and constantly return to it during the program, as we invite them to reflect on their growth.

Second, the SSTE Program Learning Outcomes (see Appendix B) are arranged in seven categories: Educational (In)Justice Contexts, Humanizing Classroom Community, Critical and Culturally Sustaining Pedagogy and Lesson Design, Humanizing Assessment, Critical Praxis, Positionality, and Family and Community Cultural Wealth. All SSTE courses draw from these program-wide learning objectives.

(2) Student Screening and Early Foundations for Social Justice Teaching

Prospective graduate credential students who are invited to interview are required to review two documents: (1) our program learning outcomes; and (2) the article, "Unlearning Colorblind Ideologies in Education Class" by Jung-ah Choi. The former reiterates the transformative practices to which we are committed; the latter helps applicants understand the ideological constructs of colorblind ideologies. During the interview, they are asked specific questions about both documents, as well as to reflect on their own schooling context, their experience with historically marginalized groups, and their racial awareness.

While many of the students in the SSTE program come to Saint Mary's as graduate credential students, considering recent policy change in California, we are in the process of building an integrated undergraduate single subject teacher education pathway in partnership with the Justice, Community, and Leadership (JCL) major at Saint Mary's. We assert that—while classes in respective content areas are essential for content knowledge—JCL classes, where students gain social, cultural, and historical foundations of schooling, are just as essential for political knowledge of social justice frameworks and resiliency for urban school teaching. All SSTE students are required to take a month-long intensive course entitled Foundations of Urban Secondary Education. Students are asked to consider their positionalities, the impact of their identities on the profession of teaching, and the communities in which they serve. Part of the course is taught at a school partner site, where students learn from innovative critical pedagogues through classroom observations and a teacher panel.

(3) Social Justice-Oriented Courses

In the first semester of the program, all students take a course entitled Teaching

for Social Justice, which extends from and deepens learning objectives of the foundations course. Students continue to critically explore their positionalities, learn about the community cultural wealth of the community where they are teaching, engage in the modeling of restorative practices, and learn about how teachers strive to teach for social justice "in the classroom and in the streets" (Picower, 2012). While this course offers a dedicated space to explore critical pedagogy, social justice practices underpin all courses students take in both their first and second semesters in the program.

Curriculum design is the primary focus of the two teaching methods courses: Humanizing Education Methods (first semester) and Methods for Liberation (second semester). Students learn approaches to establishing a beloved classroom community; how to craft essential questions, learning objectives, and assessments that connect to students' lives and position them as capable of tackling the world's greatest (in)justice issues; how to alter teaching through reflection and to involve students in their own learning through self-reflection; the process of learning from and being in solidarity with families and communities as partners; and integration with the arts and technology to enrich curriculum in humanizing ways. Students of all content areas meet together in a cross-disciplinary session for the first two hours of class and in the second two hours they break out into separate content area sessions.

Each semester, students also take a Praxis Seminar, rooted in Freire's (1970) conceptualization of praxis, the cyclical process of reflection and action to change the world. Students engage in cycles of praxis in relation to their student teaching field placements: (1) Identify the problem, (2) Research the problem, (3) Develop a collective plan of action to address the problem, (4) Implement the collective plan of action, and (5) Evaluate the action, assess its efficacy, and re-examine the state of the problem (Duncan-Andrade & Morrell, 2008). The seminar exposes students to the practices of critical inquiry groups established out of grassroots educational justice organizations from across the country. The seminar prepares students to empower themselves to form and maintain critical inquiry groups within and outside of their school sites during and beyond their time in the credential program.

The culminating assessment of the program that spans courses is the SSTE Digital Teaching Portfolio (see Appendix C) in which students feature various curricula and other assignments from their time in the program and write a statement of praxis identifying their areas of strength and growth along the SSTE Transformative Educator Inventory.

Professors of the courses include core program faculty, and we are intentional about hiring per-course adjunct professors who are current urban school teachers, to bring to our classrooms the latest "on the ground" lens for social justice teaching practices. Another important facet of our coursework is that all courses are cross-disciplinary, such that students from eight secondary content areas take all of their courses together, with the exception of content breakout sessions for the two methods courses described above.

(4) Field Placements to Move Social Justice Teaching Theory to Practice

The SSTE program is committed to field experiences in public, urban partnership schools that are diverse, have Title I status, and allow candidates to be supported by learning teams so that they have coherence in course and field learning. Students are placed at schools sites with a Cooperating Teacher for a full year placement.

Trainings and meetings for College Supervisors focus on understanding current practices aligned to our program learning outcomes, exploring identity and biases, and supporting pre-service teachers in our partnership schools. Over the years, supervisors unwilling to engage in these meetings left the program or were not assigned student teachers.

Significance to Teacher Education

While many teacher education programs espouse the importance and value of a social justice focus, few programs fully integrate this proposition in every facet of its programming. From the initial interview of student teacher applicants to the vision and core principles woven through every course, as well as the alignment of field placements that bring theory to practice, this paper offers a qualitative insight into a holistic approach to a social justice, urban teacher preparation program. A critical element of this unique program is its ability to stay grounded in critical pedagogical practices while maintaining flexibility to the needs and realities of urban schools. This is intentionally done by maintaining a steely-eyed gaze on itself; constantly engaging in communal reflexivity with faculty, staff, and students that lead to new iterations of projects, assignments, readings, courses, and even programmatic structures. By involving seasoned urban teacher leaders from local schools to serve as instructors, supervisors, guest speakers, and advisory panels has furthered integrated the tensions, struggles, and successes from public schools into the experience of teacher candidates. The learnings from this program offer insights in the strengths, areas of growth, potential opportunities, and even possible threats to the creation of a truly integrated social justice teacher education program.

References

Choi, J. (2008). Unlearning colorblind ideologies in education class. *Educational Foundations, 22*(3-4), 53-71.

Darling-Hammond, L. (2015). *The flat world and education: How America's commitment to equity will determine our future*. New York, NY: Teachers College Press.

Duncan-Andrade, J. M. R., & Morrell, E. (2008). *The art of critical pedagogy: Possibilities for moving from theory to practice in urban schools.* New York, NY: Peter Lang.

Farinde-Wu, A., & Fitchett, P. G. (2018). Searching for satisfaction: Black female teachers' workplace climate and job satisfaction. *Urban Education, 53*(1), 86-112.

Howell, D., Norris, A., & Williams, K. L. (2019). Towards Black gaze theory: How Black female teachers make Black students visible. *Urban Education Research & Policy*

Annuals, 6(1).
Ladson-Billings, G. (2006). From the achievement gap to the education debt: Understanding achievement in U.S. schools. *Educational researcher, 35*(7), 3-12.
Nieto, S. (2003). *What keeps teachers going?*. New York, NY: Teachers College Press.
Picower, B. (2012). *Practice what you teach: Social justice education in the classroom and the streets*. New York, NY: Routledge.
Picower, B. (2015). Nothing about us without us: Teacher-driven critical professional development. *Radical Pedagogy, 12*(1), 1-26.
Ware, F. (2006). Warm demander pedagogy: Culturally responsive teaching that supports a culture of achievement for African American students. *Urban Education, 41*(4), 427-456.
Yosso, T. J. (2005). Whose culture has capital? A critical race theory discussion of community cultural wealth. *Race Ethnicity and Education, 8*(1), 69-91.

Appendix A

Saint Mary's College Single Subject Teacher Education Program—Becoming a Transformative Educator Inventory

"Dehumanization, which marks not only those whose humanity has been stolen, but also (though in a different way) those who have stolen it, is a distortion of the vocation of becoming more fully human. The struggle for humanization, for the emancipation of labor, for the overcoming of alienation, for the affirmation of men and women as persons … is possible only because dehumanization, although a concrete historical fact, is not a given destiny but the result of an unjust order that engenders violence in the oppressors, which in turn dehumanizes the oppressed" (p.44, Freire, 1993)

Much like how Paolo Freire described the process of *becoming* more fully human in the struggle for liberation (for the oppressed and the oppressor), *becoming* an educator requires one to constantly engage in critical praxis or the process of self-reflection, reflective action, and collective reflective action. As teachers, we are imbued with the power and responsibility to interrupt the systems and cycles of oppression in our classrooms through transformative action, which include some of the following:

(1) Creating an inclusive community that disrupts and explicitly challenges dominant values that dehumanize one another and rebuilt the humanizing world we want to see.
(2) Developing curriculum that prioritizes critical consciousness and equity.
(3) Enacting culturally sustaining and community-responsive pedagogy.

Beyond content and pedagogical knowledge, which will be assessed through required observations by your college supervisor, there are other dispositions and characteristics a transformative educator must possess. We must begin by making an honest assessment of our respective positionalities, values/beliefs, dispositions, characteristics, and skills. We must also create a realistic plan of action in how we can grow and thrive in the process of becoming transformative educational leaders.

Based on a litany of research-based scholarship, our experiences working in K-12 schools, and interviews with school administrators and teachers, we have created a set of characteristics

and dispositions that have been found in successful, effective, and transformative teacher leaders. Some describe your work with students (S), while others describe your work colleagues (C), and some describe your work as an individual (I). Tier I focuses on Dispositions whereas Tier II focuses on Characteristics of becoming a Transformative Educator.

These categories and its guiding questions far surpasses the minimum expectations of the California Commission on Teacher Credentialing's Teacher Performance Expectations. Do not view these categories as static and immobile. Life is impermanent. The one constant in life is that everything is constantly changing. By identifying where you are currently, you can work to grow in areas that may help you become a transformative educator.

Use the questions below each category as a guide to assess your strengths and areas for growth on the Likert scale. Provide evidence in your past and current life to substantiate each score. You may seek the advice of close friends and family members on their views of these categories to help you self-assess. Finally, provide a score based on where you would like to be at your next assessment and what you need to continue to grow in your process of *becoming*.

Tier I - Dispositions

Characteristics & Dispositions	*Student (S), Colleagues (C) Individual (I)*	*Guiding Questions*	*Rank (1-5)*
Purpose/ Mission-driven TPE 3.4, 6.3, 6.5	S, C, I	◆ Do you have a clear sense of why you are in the education field, specifically why you are a teacher? ◆ How do your thoughts/disposition/ actions/behaviors reinforce your goals as a teacher? ◆ Is your purpose as a teacher more than disseminating knowledge and skills, but facilitating young people to become empowered to navigate and improve the world for everyone, especially those who have been historically oppressed? ◆ How do you work with colleagues with your purpose in mind? How do you seek out personal and professional development opportunities to strengthen your knowledge and skills to support your purpose-driven approach to teaching?	
Reflectiveness TPE 6.1, 6.2	S, C, I	◆ When faced with a challenging situation, do you reflect upon your role in it and how you could have done things differently?	

Characteristics & Dispositions	*Student (S), Colleagues (C) Individual (I)*	*Guiding Questions*	*Rank (1-5)*
		◆ Do you examine how you may have contributed (your behavior/ actions/ thinking/ identity) intentionally or unintentionally to the results? ◆ Do you examine themes and trends, based on past results, in making future decisions? ◆ Are you more likely to think about your role in a scenario than blame others? ◆ Do you attempt to analyze yours and others motivation(s) for why something happened? ◆ Do you keep an open mind in seriously considering the feedback from others? ◆ Are you willing to be "called in" by classmates, supervisor, cooperating teacher, faculty, and staff, recognizing that being called in is not about a call to be "politically correct" nor a reflection of the person doing the "calling in" being rude or unable to "take a joke"? ◆ Are you willing to learn from every experience, not interpreting a resource, practice, or other professional opportunity as "all good" or "all bad" but a learning opportunity to grow from?	
Problem-Solver	S, C, I	◆ When faced with a problem/challenging situation, are you likely to attempt to find a resolution with whatever means possible? ◆ Do you attempt to go through a problem-solving process (collect information to better understand the problem, analyze the information and come out with a possible solution, test it out, reflect on its effectiveness, and determine the need to reiterate)? ◆ Do you incorporate the use of others and tools to attempt to resolve a problem? ◆ Are you usually able to come up with several possible solutions to remedy a problem, including thinking outside the box and being creative?	

Characteristics & Dispositions	*Student (S), Colleagues (C) Individual (I)*	*Guiding Questions*	*Rank (1-5)*
		◆ Are you not typically stymied by multiple obstacles/challenges to a problem?	
Cultural Humility TPE 1.1, 3.2, 4.1, 6.2	S, C, I	◆ Do you recognize that your positionality (gender, race, sexual orientation, socioeconomic background) and life experiences biases your lens in how you see others, particularly those who come from a vastly different position as you? ◆ Are you interested in learning about and from others, especially those from historically marginalized communities and are not in positions of power? ◆ Do you purposely seek out the perspectives of those from nondominant backgrounds (people of color, undocumented, materially unprivileged, LBGTQAII)? ◆ Do you practice intentional listening, making space for marginalized voices, in classroom and community settings? ◆ Do you focus on how (not if) privileged parts of your identity shape your life and teaching practice?	
Community Responsiveness TPE 1.1, 1.2, 1.3, 4.6, 6.4	S, C, I	◆ Do you try to include the voices of students, their families, and community partners in your curriculum, pedagogy, and classroom space? ◆ Do you seek out and incorporate the opinions of students, their families, and community partners in making decisions about the structure, systems, and space of your classroom? ◆ Do you think about how your curriculum and pedagogy teaches knowledge and skills that are beneficial to your students' lives and the betterment of their community?	

Characteristics & Dispositions	*Student (S), Colleagues (C) Individual (I)*	*Guiding Questions*	*Rank (1-5)*
		◆ Do you work with colleagues to improve the conditions of the school for the well-being of the community?	
Trauma-Informed TPE 1.1, 2.4, 5.6, 5.8, 6.5	S, I	◆ Are you knowledgeable of the oppressive conditions that lead to trauma and know how to respectfully manage the manifestations of it? ◆ Do you actively seek out resources/ experts to better understand how trauma may have impacted the outcome(s)? ◆ Do you balance honoring the effects of trauma with inspiring students to meet high expectations, rather than lowering expectations because one feels sorry for the person?	

Tier II – Characteristics

Characteristics & Dispositions	*Student (S), Colleagues (C) Individual (I)*	*Guiding Questions*	*Rank (1-5)*
Prepared/ Disciplined/ Resilient TPE 6.3	S, C, I	◆ When provided with a project, do you have the self-discipline and persistence to complete it on time (barring unforeseen barriers)? ◆ Are you usually prepared/over-prepared for any situation? ◆ Despite overwhelming challenges/ obstacles, do you persist in solving a problem, sometimes with the help of others or seeking additional resources? ◆ Would your friends/family/colleagues say that you are a reliable person?	
Hold High Expectations TPE 2.5, 6.5	S	◆ Do you set no limits on what your students can achieve? ◆ Do you believe every student can be successful? ◆ Do you constantly challenge every ◆ Do you constantly challenge every student to do the best they can? ◆ Do you have strategies to build students' self-confidence, efficacy, and agency?	

Characteristics & Dispositions	*Student (S), Colleagues (C) Individual (I)*	*Guiding Questions*	*Rank (1-5)*
Effective Project Manager TPE 3.3, 4.1	S, I	◆ Are you able to tackle a big project, work backwards by identifying the goal(s)/purpose(s) and break it down to smaller manageable parts to get it completed? ◆ Can you scaffold semester-long goals/outcomes into manageable weekly lesson plans? ◆ Are you able to delegate roles and responsibilities, effectively to others, when necessary?	
Personable TPE 1.1, 6.5	S, C	◆ Are you perceived to be approachable by others? ◆ Do you readily share personal experiences/perspectives with others? ◆ Are you genuinely interested in learning as much about your students' personal interests as you can? ◆ Does learning about students' worlds (arts, sports, work, family) excite you? ◆ Do you work well with others, especially when presented with a conflict, are you able to work through it?	
Creating Community TPE 1.6, 2.1, 2.2, 2.3	S	◆ Do you actively think about how to create a space that students feel welcomed, included, nurtured, and appreciated? ◆ Do you incorporate things in your classroom space to support this (personal touches, plants, rug, comfortable chairs, posters, etc.)? ◆ Do you devote class time to activities that create community (check ins, healing circles, restorative justice, icebreaker activities, getting-to-know/fun games)?	
Creative & Resourceful TPE 1.3, 1.5, 2.4, 3.4, 4.6, 4.7, 6.4	S, I	◆ Are you able to make something, even with limited resources/materials? ◆ Are you able to figure out/develop a new idea that's outside the box? ◆ If you don't have what you need, do you actively seek out additional opportunities to resolve the issue?	

Appendix B

Saint Mary's College Single Subjet Teacher Education Program—Learning Outcomes

Educational (In)Justice Contexts

- Understand and demonstrate a sociohistorical and sociocultural analysis of inequity in U.S. schools and society
- Learn about communities organizing for educational justice and ways teachers are and can be involved in collective change.

Humanizing Classroom Community

- Learn and develop effective methods for cultivating a caring, supportive, nurturing, and rigorous classroom community (within our teacher education classrooms and at school sites).
- Incorporate restorative practices to inform community building and restorative justice to support socio-emotional learning and individual and collective responsibility for community
- Cultivate a supportive learning environment for all students, particularly emergent multilingual students and students with learning differences
- Communicate high expectations for student learning and classroom behavior and identify appropriate supports necessary to allow students to meet those expectations

Critical and Culturally Sustaining Pedagogy and Lesson Design

- Develop a foundation of socially just teaching and learning methods (curricular and pedagogical) that disrupt dominant ideologies and inequalities.
- Design lessons and deliver instruction that is linguistically, culturally, and developmentally appropriate to students
- Promote critical and creative thinking and analysis in students through lesson design
- Engage students through lessons enriched by substantive knowledge of the content, real-life contexts, active learning, technology, and visual and performing arts

Humanizing Assessment

- Use a variety of formative and summative assessments to meet the needs of different learners, including student self-assessment and self-reflection as partners in teaching and learning

Critical Praxis

- Use critical inquiry groups with a problem-posing framework to grow within the teaching practice
- Using critical reflection and reflexivity, consider your ideological development through schooling and socialization.
- Engage in professional consultation and collaboration with other educators to plan for instruction

Positionality

- Examine how ideologies shape our classroom space, interactions with students, parent(s)/guardian(s), colleagues, community members, and administrators
- Develop and incorporate sustainable mindfulness practices in our lives (personal and professional).

Family and Community Cultural Wealth

- Integrate family and community partners in classroom practice and student assessments
- Demonstrate professional practice growth in partnership with communities, families, students.

Appendix C

Saint Mary's College Single Subject Teacher Education
Digital Teaching Portfolio

Rationale: In our journey of rethinking assessment to be more humanizing and empowering, we have explored the role of portfolio assessments. This assessment of learning invites evaluation on a range of materials students produce over time, as opposed to a single summative test. Portfolios call on students and teachers alike to reflect on the quality and improvement of student work.

Objectives:

- To self-reflect on your areas of strength and growth on the SSTE Transformative Educator Inventory
- To showcase your teaching journey for yourself, your classmates, your familia, and potential employers
- To engage in and prepare for ongoing praxis as a teacher
- To imagine the big ideas and concrete logistics behind supporting your own students to build portfolios

What do I upload to my Digital Portfolio?
Your portfolio will consist of the following five sections:

- Vision
  - Social Justice Infographic (SSTE 340)
  - Educational Philosophy Statement (SSTE 380), which builds on the Teaching as Humanization Chapter (SSTE 350)

- Curriculum
  - At least two of the following:
    - Humanizing Lesson Design (SSTE 350)
    - Humanizing Unit Design (SSTE 350)
    - Project-based Learning Unit (SSTE 380)
- Humanizing Classroom Community
  - Letter to Families (SSTE 350)
  - Humanizing Classroom Environment Plan (SSTE 350)
- Letter of interest in teaching position
- Portfolio Praxis: Individual Development Plan
  - Finally, you will identify two to four elements on the transformative educator inventory you feel are areas of strength for you, name what TPEs they align with, and identify how your work across the portfolio is evidence of those strengths. You will also identify two to four areas on the inventory in which you wish to grow more, name what TPEs they align with, and articulate why and how you hope to grow in those areas. You will write a Portfolio Praxis statement (1 page, single-spaced), capturing this loving and critical self-reflection.

Note:

- With the exception of Portfolio Praxis, notice that all of the above is work are assignments you have done or will do within classes. Thus, creating the Digital Portfolio is truly about compiling what you have done and engaging in praxis, in your process of "becoming."
- That said, you may add more categories to your Digital Portfolio website as well as more resources within any category.
- We encourage you to add a "cover photo" on your home page and any additional pictures of yourself, student work, and your classroom.

Leveraging Preservice Teacher Recruitment Through an Examination of Admissions

By Derek R. Riddle & Kimy Liu

Abstract

Teacher shortages continue to persist at the turn of the decade despite varied efforts to curb the trend. There are many areas in the teacher recruitment and retention pipeline that can address the growing teacher shortage, but there are few studies examining this issue at the front end of the pipeline, namely the admission process into a teacher education program. The current study explored the setbacks and barriers prospective teacher applicants encountered when seeking admission into the teacher preparation programs at the authors' institution. Findings identified both sources of support and sources that create barriers for prospective teacher applicants. Implications for policy are discussed.

Keywords: teacher education programs, admission

Introduction

Teacher shortages across California continue to be a lingering challenge as

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indicated by recent policy reports (e.g., Blume, 2020; Learning Policy Institute, 2019) where roughly 45% of the teaching positions are filled by interns or other non-credentialed teachers (California Commission on Teacher Credentialing, 2020). Even though the solution to this persistent problem is multi-faceted (e.g., higher salaries, improved working conditions, etc.), a deeper exploration of the current admission policies, practices, and processes of the California teacher preparation system as a whole may be a figurative rock left unturned in minimizing the teacher shortage demand. For instance, teacher preparation programs (TPPs) in the California State University system across the state have a multitude of admission criteria mandated and influenced by three governing bodies: executive orders produced by the Chancellor of the California State University system, the California Commission on Teacher Credentialing, and leaders and coordinators of the respective TPPs. These requirements for admission include criteria such as prerequisite coursework, early field experience, qualifying examinations, Tuberculosis waivers, and background checks (California Commission on Teacher Credentialing, 2017). While there are many programs across the United States that use similar admission criteria to ensure that qualified candidates enter TPPs, evidence from prior research suggests that these criteria may create more barriers than intended.

For example, states require some criterion-referenced tests or performance assessments as the essential requirements for granting initial teaching licensure. The intended purpose of these evaluations and assessments are to ensure teacher candidates have necessary professional knowledge and clinical skills to be successful. However, the validity, reliability and equity issues of these evaluation tools have not been thoroughly examined. Roughly 54% of teacher candidates fail their professional licensing exams on their first attempt resulting in multiple costly reattempts (Downey, 2019). This is exacerbated among teacher candidates of color (Putnam, 2019). Unfortunately, the data of California licensing exams show similar patterns. Roughly a third of all teacher candidates in taking California credentialing exams do not pass (as cited in Lambert, 2019). As a result, those who fail end up giving up on pursuing a career as a teacher (Lambert, 2019). Although we do not advocate for removing these qualifying exams as measures of quality-control, we should be cognizant about the unintended barriers associated with these exams. It might deter some otherwise qualified teacher candidates from entering the teaching profession.

In light of the data on credentialing exams and our own anecdotal data, we sought to begin our exploration of the teacher preparation pipeline at the front end of the process, in other words, the barriers and setbacks of the admission criteria under the current policies and practices in the California State University system. For this study, we sought to explore the effect of the system's policies, practices, processes at our own institution's TPPs. We were interested in understanding *what barriers and setbacks do teacher candidates encounter when seeking to apply for our TPPs?* With these new understandings, we can advocate for possible policy changes or implement program improvement plans to address this issue.

Literature Review

TPPs across the United States have varying qualifications that prospective applicants must meet to be admitted into their respective programs. The purpose of having clear and specified admission criteria serves to assess candidate readiness and to possibly weed out any potentially ineffective future teachers (DeLuca, 2012; Miller-Levy et al., 2014). Research has identified some common admission requirements of TPPs across the country including grade point average, early field experiences, some measure of basic skills proficiency, introductory education coursework, a writing sample, letters of recommendations, an interview with program faculty, passing scores on a state subject-matter examination, and background checks (Ginsberg & Whaley, 2003). Furthermore, some TPPs programs also seek to ascertain a prospective applicant's dispositions related to teaching before granting admission in the program (Harrison, et. al., 2006; Wasicsko et al., 2009). Within each requirement, some states allow for flexibility for candidates to meet the standards.

While TPPs have a strong desire to serve as gatekeepers to the profession through establishing admission criteria in hopes to find strong candidates who will serve kids and communities well, these established and well-intentioned criteria may not always accomplish this purpose and also have side-effects. For example, research findings show that there is currently no predictive validity between admission criteria to TTPs and the candidate success within the program (Choi et al., 2016; Dee & Morton, 2016; Fuller, 2014; Mihelic, et. al., 2018). Moreover, these admission requirements tend to cause negative effects on the prospective applicants. As stated earlier, half of the prospective teacher candidate pool seeking to meet the state examination requirements for admission rarely meet those requirements on their first attempt and often pay costly reattempts or end up giving up (Downey, 2019; Lambert, 2019; Putnam, 2019). It is unclear whether such data indicate the lack of readiness of the applicants or the fairness of the criteria (Van Overschelde & López, 2018). These findings serve as points of reflection for TPPs as to whether these intended criteria are purposefully identifying quality candidates.

Recently, Linda Darling-Hammond, in working to address the teacher shortages in California, stated that the goal is to increase the number of people who want to be teachers while maintaining standards (Lambert, 2019). The prior research examining admission criteria have indicated: (1) that there may not be any predictive validity to these requirements (as a whole) and (2) that they may cause more roadblocks and challenges to prospective candidates, particularly the ones from marginalized groups, thus exacerbating the teacher shortage problem and the goal of diversify the teacher pool to reflect the diversity of K-12 classrooms. While prior literature highlights barriers to a few of the common admission criteria, we were interested in exploring if there were other unforeseen barriers, especially from the view of prospective candidates, whose views and lived experiences seem lacking in

the literature. Aligned with Darling Hammond's recommendation and the perceived gap in the literature, our study seeks to understand the admission process from the perspective of the prospective candidate. It is our hope that by better understanding their lived experiences that we may have an increased understanding of how to better support them in the process of becoming a teacher without lowering the standard.

Methods

The purposes of this study are to (a) explore, with the intent to seek to change, the existing infrastructure and possible inequality regarding the application and admission process of our TPPs and (b) use the information to identify the tipping points of this process so as to recruit more qualified prospective applicants to the TPP. Following a critical action research orientation, we took the following steps and procedures.

Participants. At our institution, we have two undergraduate pathways that prepare students for the credential programs. The Liberal Studies program prepares candidates seeking to earn a multiple subject credential and an education specialist credential. For those interested in earning a single-subject credential, we offer subject matter preparation programs in the following content areas: art, English, kinesiology, math, social science, and Spanish. We classified these students as students on a traditional pathway to earning their credentials. In other words, the time-elapsed between their BA degree and admission to credential programs is less than one year. All other students (i.e., students who earned a bachelor's degree but not in the content area for which they are seeking a credential or post-baccalaureate and/or graduate students seeking to earn a credential) were classified as non-traditional students because the time-elapsed between their BA and admission to the credential program is at least one year.

Data collection. Dismayed by the lukewarm responses of the Fall 2019 pilot study (101 responses to survey and 4 participants in focused group), we tweaked the recruitment process to increase the responses in the Spring 2020 study. To ensure the perception of each of these classifications of students were represented in the surveys, we elicited an ambassador (a designated faculty representative) from three credential programs and their prospective undergraduate-feeder programs to recruit participants to complete a survey. With the assistance of the program ambassadors, 213 participants completed the survey, 54 of them were seeking multiple subject credentials, 107 were seeking single subject credentials, 32 were seeking education specialist credentials, and 20 were seeking the concurrent option (MSCP +ESCP). The respondents were representative of our general population of TPPs and their feeder programs. Among these participants, 75 agreed to participate in follow-up focus group interview and seven participants were purposefully selected because they represent diversity among sampling populations regarding gender, race, cre-

dential seeking, and other pertinent factors (such as the status of first-generation, non-traditional students, financial concerns and academic readiness) (See Table 1).

The focus group interview was semi-structured. These interviewees chose their own pseudonym and were identified as such during the interview. The interview was video recorded and transcribed for the purpose of data analysis.

We also collected external documents related to the admission process. Those documents were (a) CSU Chancellor Executive Order 1077, California Commission on Teacher Credentialing leaflet and documents related to admission and credential requirements, and the single-subject, multiple-subject, and education specialist programmatic requirements and policies related to admission.

Data analysis. We analyzed all the data using thematic analysis and triangulated our findings between the three data sources (i.e., survey data, focus group, and external documents). We also analyzed the data together for consensus.

Findings

Following is a summary of the data from the current study. The preliminary analysis of the results showed prospective applicants identified sources of sources and sources that created barriers. Only those sources with implications for statewide policy are shared.

Table 1
Demographic Information for Spring 2020 Focus Group

	1	2	3	4	5	6	7
ESCP	X						
MSCP		X				X	
SSCP			X	X	X		X
Undergraduate				X			
Non-Traditional[1]			X	X	X		X
Male			X				
Female	X	X		X	X	X	X
White	X		X		X		X
Hispanic		X					
Others				X			
Academic Ready[2]	X	X		X	X	X	
Academic Not Ready			X				X
1st Generation	X			X	X		
Non 1st Generation			X				X
Finance is a Factor	X	X	X	X	X	X	
Finance is not a Factor							X

[1] Non traditional students are the ones whose first semester of credential program and completion of BA/BS is mor ethan one year.
[2] Defined as meeting all the admissions criteria to be fully admitted.

Source of support. During the Spring 2020 focus group interview, the participants identified encouragement of mentors and family, and their own inner conviction as the major sources of support that sustained their efforts in the application process. All seven participants from the current focus group participants stated that they enter the teaching profession by choice, and altruism (the belief that they can do good and benefit others) is the major motivation). Participants attributed the encouragement from parents, family, and mentors sustained their pursuits to becoming teachers. These findings were aligned with the ones of the Fall 2019 pilot study. In the Fall 2019 focus group, two most poignant examples of external sources of support are words of encouragement from a faculty member in the subject matter preparation program and a systematic support of Noyce Scholar Program. In the Spring 2020 focus group, participants stated that, in addition to the encouragement of faculty and mentors, the checklist of admission requirements (a self-made tool at our institution) was helpful in facilitating their self-monitoring of the application process. Participants were able to find the checklist at the credential office and its website. These findings were confirmed by the survey data.

Source of barriers. During the Fall 2019 focus group interview, some participants stated that the dissuasion of family, faculty, and peers in the undergraduate programs can undermine their willingness to enter the teaching profession. All participants expressed great concerns regarding limited access to the K-12 schools for gaining 45 hours of early fieldwork experience, a requirement set forth in the CSU Chancellor Executive Order 1077. They considered the requirement of early field experience and completion of American Government, an additional requirement established by the CCTC, as daunting tasks. Some school districts were slow to respond to their volunteer requests, others would only grant a few hours within one school site. The gain access to early field experience was contingent upon the applicants' own extant social network, which was a greater hurdle for non-traditional students or career changers. Moreover, both focus group panels complained about the long-distance commute between the CSET testing sites and limited availability of testing opportunities in certain subject areas, which could derail their application process and jeopardize their chances to be qualified applicants. The California Subject Examinations for Teachers (CSET) is a requirement established by the CCTC and is described in the CSU Chancellor Executive Order 1077. These findings were confirmed by the survey data.

Discussion

In this discussion, we are going to express our concerns on different types of hurdles that might potentially derail the prospective applicants' resolve in coming to the teaching preparation pipelines.

Teacher Credentialing Examinations

Most states' teacher licensing agencies require prospective teacher applicants to demonstrate proficiency in basic literacy and computational skills and competency in the subject matter they plan to teach. In all three of our programs, we have a significant portion of students that do not pass these tests at the first attempt. Therefore, they need to retake these exams causing them to either be conditionally admitted or denied at the time of admission. The costs and logistics of retaking these exams cause delays in program admission and/or completion (Downey, 2019).

To our surprise, an overlooked aspect of CSET (California's subject matter competency exam), was the limited availability of CSET testing opportunities and scarcity of the testing sites. For some assessments, there are no available testing sites within 90-minute drive of our campus. Coupled with prior research regarding the low percentage of first-time success and the high-cost of retaking the CSET (Downey, 2019), this additional barrier could derail the application process for some applicants by adding further costs to the process of demonstrating subject matter competency. Institutions and state agencies should consider being mindful of this unforeseen and unnecessary setback and seek to create available tests and testing centers at appropriate distances for prospective teacher candidates. Each CSU campus may consider establishing a testing center on their own campuses to serve their prospective teacher applicants.

Early Field Experience

Another surprising finding was the concern about the requirement of 45 hours of field experience (see CSU Chancellor's Executive Order 1077). The requirement for 45 hours of field experience was a non-issue for applicants that are designated in our undergraduate feeder programs (such as Liberal Studies and approved subject matter preparation programs) because these applicants would accumulate hours of early field experience embedded in the coursework. However, for applicants not in these feeder programs, they would have to utilize their own social network to fulfill the early field experience by becoming a volunteer, paraprofessional, or substitute teacher. Oftentimes, these applicants would have limited contact with K-12 schools. Therefore, they often found the logistics of obtaining 45 hours of early field experiences intimidating and cumbersome. This was compounded by the school's limitation of the number of hours prospective teacher applicants could earn and by the districts requiring livescan/background check (sometimes not honoring the university livescan/background check) before the prospective applicants could earn early field experience at their sites. The cost of requiring multiple livescan can be a deterrent for prospective applicants.

Working with partner districts to ensure access to early field experiences may not be the only solution. TPPs should be cognizant of imposing on the K-12 schools to host their applicants for early field experience with no financial compensations

or known benefit to the schools. The revolving door of early field experiences can be a burden to the K-12 partner schools and a source of stress for the applicants who have limited social networks at the K-12 school system. For the students not from the designated feeder programs, it is important to consider who should be responsible to monitor not only the quantity but also the quality of their early field experience. If the 45 hours field experience is a hurdle for applicants, with the interest of recruiting qualified applicants from diverse backgrounds, should the programs allow for some flexibility about how to meet this requirement? For example, can a portion of such early experience be obtained in the guided observation in the virtual classrooms, where applicants take notes of different aspects of an exemplar classroom and engage in guided reflection? These alternate forms of early field experience can be better than unsupervised volunteer experience or non-participatory passive observation for the purpose of gathering the necessary hours only. Once successfully completed the guided tour of exemplar virtual classroom, applicants of non-feeder programs can be better equipped to enter K-12 campus and optimize their early field experience.

Conclusion

Future teacher candidates seeking to enter program walk on a figurative balance beam deciding whether becoming a teacher is the right career decision for them. All students face barriers in the process of entering the profession, but when the sources of support outweigh the barriers, then the likelihood that a candidate will successfully move forward in the trajectory of becoming a teacher. However, if the barriers outweigh the sources of support, there may be a diminishing of likelihood candidates entering the pipeline by admission into a TPP. This conceptual model may serve as a catalyst for other TPP at other institutions to examine their own barriers and sources of support. This may lead them to discover which specific sources of support might mitigate those barriers. Furthermore, state systems should re-examine the purpose of their admission criteria and whether that criteria is serving the intended purpose or creating undue clogs in the teacher pipeline.

References

Blume, H. (2020, January 11). Newsom's budget includes $900 million to address California teacher shortage. *Los Angeles Times*. Retrieved from https://www.latimes.com/california/story/2020-01-11/newsoms-budget-includes-900-million-to-address-california-teacher-shortage

California Commission on Teacher Credentialing. (2017, March 15). *How to become a teacher in California*. Retrieved from https://www.ctc.ca.gov/credentials/teach

California Commission on Teacher Credentialing. (2020, April 9). *California educator supply data*. Retrieved from https://www.ctc.ca.gov/commission/reports/data/edu-supl-landing

Choi, H., Benson, N. F., & Shudak, N. J. (2016). Assessment of teacher candidate dispositions:

Evidence of reliability and validity. *Teacher Education Quarterly, 43*(3), 71-89.

Dee, A. L., & Morton, B. M. (2016). Admissions metrics: A red herring in educator preparation? *Issues in Teacher Education, 25*(1), 73-89.

DeLuca, C. (2012). Selecting inclusive teacher candidates: Validity and reliability issues in admission policy and practice. *Teacher Education Quarterly, 39*(4), 7-31.

Downey, M. (2019, April 16). New analysis finds 54 percent fail tests on first try. *The Atlanta Journal-Constitution*. Retrieved from https://www.ajc.com/blog/get-schooled/why-many-new-teachers-stumble-licensing-exams/OQoctgAotFhb8CwWXnfhjP/

Fuller, E. J. (2014). Shaky methods, shaky motives: A critique of the National Council of Teacher Quality's review of teacher preparation programs. *Journal of Teacher Education, 65*(1), 63-77. doi:10.1177/0022487113503872

Ginsberg, R., & Whaley, D. (2003). Admission and retention policies in teacher preparation programs: Legal and practical issues. *The Teacher Educator, 38*(3), 169-189. doi:10.1080/08878730309555316

Harrison, J., Smithey, G., McAffee, H., & Weiner, C. (2006). Assessing candidate disposition for admission into teacher education: Can just anyone teach? *Action in Teacher Education, 27*(4), 72-80. doi:10.1080/01626620.2006.10463403

Lambert, D. (2019, January 21). Required tests roadblock for many aspiring California teachers. *EdSource*. Retrieved from https://edsource.org/2019/required-tests-roadblock-for-many-california-teacher-candidates/607239

Learning Policy Institute. (2019). *Understanding teacher shortages in California: A district- and county-level analysis of the factors influencing teacher supply and demand* (interactive map). Palo Alto, CA: Learning Policy Institute.

Mihelic, G., Bosch, C., Boyd, K., & Miller, M. L. (2018). The relationship between admission criteria and pre-service teacher preparedness for a small rural educator preparation provider. *Administrative Issues Journal, 8*(2), 47-59. doi:10.5929/2019.1.14.3

Miller-Levy, R., Taylor, D., & Hawke, L. (2014). Maintaining the boundaries: Teacher preparation program admission criteria for screening quality candidates. *Administrative Issues Journal, 4*(1).

Putman, H., & Walsh, K. (2019). A fair chance: Simple steps to strengthen and diversify the teacher workforce. *National Council on Teacher Quality*. Retrieved from https://www.nctq.org/dmsView/NCTQ_A-Fair-Chance_Final_EMBARGOED?fbclid=IwAR1UgMQwYwdvIcB-1STOWZPtghDauwYbETYR5x-dmUz18Yi36HrzVsQNXos

Van Overschelde, J. P., & López, M. M. (2018). Raising the bar or locking the door? The effects of increasing GPA admission requirements on teacher preparation. *Equity & Excellence in Education, 51*(3-4), 223-241.doi: 10.1080/10665684.2018.1539355

Wasicsko, M. M., Wirtz, P., & Resor, C. (2009). Using dispositions in the teacher admission process. *SRATE Journal, 18*(2), 19-26.

Utilizing Video Mentoring to Support Policy and Practice in K-12 and Higher Education

By Allison L. Smith, Melissa Meetze-Hall, Keith A. Walters, & Brian J. Arnold

Introduction

When considering a construct as complex as learning, it is somewhat myopic to imagine that one perspective, rule, practice, or philosophy will be effective for all learners in all environments. Add in the complexity of online learning and nearly any sweeping statement about what always works or is always better tends to fall apart under any amount of scrutiny. And yet, when reviewing the expanse of technology studies, it becomes evident that there are many skeptics who still discount technology-based solutions as viable tools for effective teaching and learning, no matter how they are applied. Some of these skeptics even include university instructors and prominent school board members (Allen Seaman, 2013). Despite a

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strong research-base supporting the benefits and positive impacts of online learning, coaching, and mentoring (Koutropoulous, 2011; Surrette & Johnson, 2015; Quintana & Zambrano, 2014), the historical educative perspectives remains that face-to-face coaching is superior (McCutcheon, O'Halloran, & Lohan, 2018) to video coaching.

Given that teachers are seen as the critical catalysts of student achievement (Alton-Lee, 2003; Nye et al., 2004), and combined with the current teacher shortage and the cost associated with traditional teacher preparation, interest in using technology to support teacher candidates continues to grow. Understanding how technology can advance teacher practice through video mentoring (an established and often discounted method of effective distance mentoring) can guide efforts to foster the development of educator practice. In researching the impact of video-aided reflection and feedback on practice, study results demonstrated the potential of video to positively impact new teacher practices (Meetze-Hall, 2018). Furthermore, video mentoring also supports teacher preparation programs to uphold program standard expectations that, in contexts across California, can be challenging.

Educator Developmental Needs and Unit Expectations

Earning a teaching credential is a rigorous journey. Mandated tests, theory-based university courses, and countless hours of observations eventually evolve into the even more demanding role of assuming classroom teacher responsibilities. Throughout the training experience, excitement to implement vocational visions mingle with fear of the unknown. Successful teacher candidates emerge with continuous improvement and professional humility dispositions.

Unfortunately, the desire to maintain status-quo pedagogical practices can challenge a candidate's continuous improvement efforts. Problems emerge when a candidate assumes their personal metacognitive aptitudes mirror those of their students. Annoyances materialize when rigid checklist implementation of "best-practice" pedagogies fail to generate positive student learning outcomes. Temptation to interpret minimal student participation or parental complaints as an educator-leader failure can result in candidate despondency (Darling-Hammond, 2006, 2010).

Every setback has the potential to tarnish candidates' sense of agency. Catastrophe arises when an individual allows self-deception to support their self-confidence. Self-righteous schemas now generate justifications for the candidate's strategies and behaviors based on cognitive manipulations of reality (Arbinger Institute, 2010) rather than empirical evidence. Hope can return, though, through mentors who replace rigid logical-linear developmental perspectives with a holistic view of maturation rooted in contextually relevant, circuitous talent expansion (Sternberg, et al., 2009).

The need for expert assistance propelled the California Commission on Teacher Credentialing (2016) to develop common and program-specific standards. Common standards apply to all educator credential program activities. Common standard

three provides overarching expectations for research-based, new candidate support. A synthesis of common standard three suggests three foci: (1) the verbs practice, learn, experience, and implement point to the need for carefully selected learning opportunities; (2) the expectation that all candidates demonstrate knowledge, skills, and competencies denotes learning outcome; and (3) the call for cohesive and comprehensive support conveys non-negotiable program conventions.

Andragogic principles provide a research-base for common standard three implementation. Self-directed reflections afford insight into internal motivators by linking content/theories with prior, as well as current, life experiences. Guidance leverages "what if" questions to inspire novel applications of familiar resources. Context-based evaluations assess the interaction of academic agency, intrinsic convictions, and growth-oriented persistence. Dynamic professional discourse affirms and values candidate contributions during examination of potential milieu modifying contemplations (Csikszentmihalyi, 1997; Darling-Hammond & Oakes, 2019; Drapeau, 2014; Gruenert & Whitaker, 2015; Hattie & Donoghue, 2016; Knowles, et.al., 2015; Lovely & Buffum, 2007).

Professional inquiry now drives all supervisor-candidate interactions. Mentors lead collaborative investigation that use theories and data to devise a contextual understanding of each participant's needs. Unhurried deliberations dissect intended and unintended outcomes. Missteps and setbacks drive individual action plans. An evolutionary state of improvement becomes the new norm (Bocala, 2015; Darling-Hammond, 2006; Dewey, 1902; DuFour & Marzano, 2011; Dweck, 2006, Dudley, et.al, 2019; Erbilgin, 2019; Ingersoll & Strong, 2011; Tan & Caleon, 2016).

Equity is a longstanding issue in contemporary teaching (Klein, 1985; Simon & Beatriz, 2007; and Lucas & Beresford, 2010). While it tends to (appropriately) revolve around diversity, there are also more subtle equity issues at play in any mentor-mentee relationship. At heart, traditional teacher performance evaluations (Jacob & Lefgren, 2008) are a game of comparing two people's subjective memory of events and evaluating the potentially skewed data. The most powerful force for equity that video mentoring brings to the table is to generate a third point perspective; an objective data point, in this case a recorded video, that both participants can look at, discuss, and draw conclusions. This helps to mitigate both the flawed and subjective memories of the stakeholders while also creating an equitable (third data point perspective) place from which evaluative discourse can flow (DuLuca, Bolden & Chan, 2015; Sinnema, Sewell & Milligan, 2011).

Consequently, video technology has the capacity to strengthen professional inquiry practices. The video itself creates an objective third-point of evidence that allows a sequenced examinations of a singular teaching event. Initial viewing of videos emphasizes what is occurring and a second viewing allows participants to resolve diverse supervisor-candidate video segment selection and/or scene emphasis. A third viewing allows discourse focusing on why the activity occurred, as well as why the ensuing outcomes happened.

Furthermore, unlimited access to the video technology guarantees site-based observation times that offer the best and most compressive picture. Finally, the ability for supervisor groups to collectively watch and evaluate a candidate's teaching supports mentoring reliability and consistency. Throughout the process, active listening and mutual respect provide an emphasis on growth-mindset oriented formative assessment.

Policy Impacts of Video Mentoring in Pre-Service Teacher Preparation

The California Commission on Teacher Credentialing (CCTC) program standards ensure that all pre-service and in-service teachers are supported through the credential-earning process. Video coaching, mentoring, and feedback aligns with (and in some cases is even required by) education policy that undergird the approved program standards. In both teacher preparation and administrative preparation, video is used extensively as a means for candidates to demonstrate knowledge and skill within the Teacher Performance Assessments and Administrator Performance Assessment. Specific program standards address the importance of highly qualified, experienced educators during the clinical practice portion of educator preparation programs. However, some policies may lack infrastructure or funding to fully support candidate placement in remote and urban areas of the state.

Preliminary Credential Program Standard Two: Preparing Candidates to Master the Teaching Performance Expectations

Candidates are required to master the Teaching Performance Expectations (TPEs). A primary source for candidates to learn the TPEs is from their mentor teachers and course instructors. Utilizing video mentoring tracks growth and evidence of candidates mastering the TPEs. Video mentoring platforms offer candidates and university supervisors the ability to provide time-stamped annotations throughout videos of the candidate teaching and align the annotations to the TPEs. Candidates are able to see exactly where there is evidence of the TPEs, in real-time and reflecting, to increase TPE awareness and mastery.

Additionally, teacher preparation programs can aggregate and disaggregate data to show how candidates in their programs master the TPEs. Disaggregating the data by multiple subject, world languages, and single subjects shows program strengths, as well as areas for program improvement. These data also help with annual program assessment reports and accreditation reports.

Preliminary Credential Program Standard Three: Clinical Practice

Organization of Clinical Practice Experiences

Standard three includes reference to utilizing video mentoring in the program organization of clinical practice. Video mentoring is fully aligned to this standard

and helps programs document growth, as well as provide video evidence and opportunity for candidates to connect theory to practice in the progression of the program. Program design is enhanced with real-time data to see where the organization of the clinical practice experiences can be improved and/or program strengths. These consistent and robust findings can be included as direct measures in program reports.

Criteria for the Selection of Program (University) Supervisor

The Commission on Teaching Credentialing requires that preservice teachers be supervised by a mentor with matching subject credentials. As an example, English teachers need a supervisor with an English credential. In California, the third largest state (over 150,000 square miles) in the US with 12% of the entire country's population, getting a matching credentialed university supervisor to a specific school at a specific time is a resource-intensive endeavor at best. By allowing teacher candidates to record themselves teaching and share it with their mentor for asynchronous evaluation, this task becomes more accessible for the stakeholders involved.

Additionally, educators in the field, with a current connection to K-12 education, can function as the university supervisor. Without the use of video, university supervisors are typically retired educators with more distant experience in K-12 schools. The expectation is that university supervisors have recent experience in K-12 schools and video mentoring allows for current exceptional educators to also be university supervisors.

Preliminary Credential Program Standard Five: Implementing the Teaching Performance Assessment

All teacher candidates in the state of California must pass a Teaching Performance Assessment (TPA). Part of the TPAs include candidates video recording themselves teaching and annotating the video in reflective ways that connect with the TPEs. Embedding video mentoring through a teacher preparation program ensures candidates have experience video recording themselves teaching and annotating those videos with reflective text that is connected to the TPEs. The TPA is the culminating assessment at the end of the teacher preparation program to enable candidates to be recommended for a preliminary teaching credential. Including video mentoring throughout a program prepares candidates for the TPA video and annotation requirements.

Impacts Beyond Program Standards

All too recent measures to curb the global COVID-19 virus pandemic have revealed the underlying power of video mentoring as a tool that allows people to

access teaching and learning in a manner consistent with social isolation guidelines. A theoretical online class lead by a student teacher could be recorded and shared with a teacher supervisor for feedback and support. In a world where the ability to be face-to-face is met with new challenges, access to effective new tools is essential to meet the needs of new realities.

As has always been the case, there are learners, for whom, traditional face-to-face interaction poses physical, mental and or emotional barriers. Video mentoring offers new points of entry for these learners and creates opportunity to demonstrate and assess skills without having to be placed in an unwelcoming physical environment. Like many distance learning tools, video mentoring offers the ability to avoid a flight of stairs and specific social risks in one fell swoop.

Finally, the issue of student security is addressed by the use of video mentoring. Public schools devote significant time and resources to (in short) keep their students safe. That means having a labor-intensive vetting process for anyone who sets foot in their classrooms. Video mentoring circumnavigates this issue, as the university supervisor does not need to enter the school, and while FERPA and privacy issues must be respected in terms of the recorded footage, the school engenders no physical risk by admitting a new person into a room with their students.

Historical Perspectives on Video Mentoring for In-Service Teachers

In addition to the benefits of video mentoring in pre-service teacher development and meeting program standards, mentoring during the induction phase for new teachers (in their first two years) is widely recognized as important for developing and retaining teachers in the field (American Institutes for Research, 2015). As of 2016, 29 states used induction as a tool to support quality teaching and the retention of teachers new to the profession (Goldrick, 2016). In theory, induction programs include support for new teachers, which includes assessment curriculum coupled with a mentor (coach).

In support of the newest in-service teachers, the California Commission on Teacher Credentialing (2015) Induction Program Standards assert,

> Induction is the support and guidance provided to novice educators in the early stages of their careers. Induction is an individualized, job-embedded, two-year program. The design of the program is based on a sound rationale informed by theory and research, is primarily coach-based, and includes personalized learning. (p. 3)

With the importance of a trained and skilled coach (mentor), growing numbers of studies have focused on mentor learning and the training elements that supports mentors. Studies have focused on the profession of mentoring and explored both the knowledge base of mentoring and the practice of mentoring. However, even with today's expanded use of technology in the classroom and in teacher preparation programs, there is a void in literature and analysis of what substantive instructional

or pedagogical expertise can be developed through online links between novice and experienced teachers (Mitchell et al., 2017).

In addition to research on mentor development, researchers claim that, "teachers benefit from opportunities to reflect on teaching with authentic representations of practice" (Sherin & van Es, 2009, p. 21). In one study on video use by mentors, video was used as an authentic representation of practice, providing a tool for the noticing of behaviors. Induction mentors were asked to consider their prior experience with video then use video for self-reflection as they coached a mentee. During video observation, mentor participants were able to affirm mentees, but also rephrased, prompted, and clarified critical components of the video observation. The themes of their observations included: awareness, feedback, reflection, and impact. In summary, mentors had a change in practice when engaging in video-aided reflection and video-aided peer feedback. The changes that mentors enacted varied based on their self-reflection of their coaching practice (Meetze-Hall, 2018).

Policy Impacts of Video Mentoring for In-Service Teachers

The findings of video mentoring studies can provide the educational community with insights on two important factors: (1) how best to select mentors and, (2) how best to facilitate the development of mentor expertise. Within teacher induction, policy is closely aligned to licensure standards and therefore these findings have policy implications in the educator preparation community.

The educator preparation community should consider requesting detailed policy for induction mentor training to include support in the use of video with in-service teachers. Currently, the induction standards require an induction program to provide "ongoing training and support for mentors that includes, but is not limited to: coaching and mentoring, support for individual mentoring challenges, reflection on mentoring practice, and opportunities to engage with mentoring peers in professional learning networks" (CCTC, 2015, p. 3). While the components of the standard are evident in induction programs, the CTC and induction community should include more targeted suggestions on how best to develop mentor skills such as the use of video as instructional tool and video-aided reflection.

Conclusion

Video mentoring is not a silver bullet solution to all of teaching and learning's challenges; however, it does offer some profound affordances that make it a powerful tool that allows new modalities and methods for preservice and in-service teacher learning. In the educator development climate of California 2020, the need for: (a) teacher candidate supervisors with matching credentials, (b) unexpected health crisis like COVID-19, (c) meeting program standards, program reports, and accreditation reports, (d) the desire to simply limit the number of people a school has to vet for access to their classrooms and, (e) improving mentor-mentee capac-

ity, makes video mentoring a powerful tool for educator development, in a more robust and flexible manner.

References

Agran, M., Jackson, L., Kurth, J. A., Ryndak, D., Burnette, K., Jameson, M., ... & Wehmeyer, M. (2020). Why aren't students with severe disabilities being placed in general education classrooms: Examining the relations among classroom placement, learner outcomes, and other factors. *Research and Practice for Persons with Severe Disabilities, 45*(1), 4-13.

Alton-Lee, A. (2003). *Quality teaching for diverse students in schooling: Best evidence synthesis*. Washington, DC: Education Counts.

American Institutes for Research. (2015, June 20). *An open letter to Governors*. https://www.air.org/search/site/retaining%20teachers%202015

Arbinger Institute, (2010). *Leadership and self-deception: Getting out of the box*. Oakland, CA: Berrett-Koehler Publishers.

Baran, E., & Correia, A. P. (2009). Student-led facilitation strategies in online discussions. *Distance Education, 30*(3), 339-361

Bocala, C. (2015). From experience to expertise: The development of teachers' learning in lesson study. *Journal of Teacher Education, 66*(4), 349-362.

California Commission on Teacher Credentialing. (2016, March). *Common standards, common standards glossary, common standards submissions requirements*. Retrieved April 3, 2020 from https://www.ctc.ca.gov/docs/default-source/educator-prep/standards/commonstandards-2015-pdf.pdf?sfvrsn=dad5c6f0_6

California Commission Teacher Credentialing. (2015). *Educator preparation standards*. Retrieved on April 3, 2020 from https://www.ctc.ca.gov/educator-prep/program-standards

Csikszentmihalyi, M. (1997). Happiness and creativity: Going with the flow. *Futurist, 31*(5), 8-12.

Darling-Hammond, L. (2006). *Powerful teacher education: Lessons from exemplary programs*. New York, NY: John Wiley & Sons.

Darling-Hammond, L. (2010). *The flat world and education: How America's commitment to equity will determine our future*. New York, NY: Teachers College Press.

Darling-Hammond, L. & Oakes, J. (2019). *Preparing teachers for deeper learning*. Cambridge, MA: Harvard Educational Press.

Dewey, J. (1902). *The school and society and the child and the curriculum*. Chiago, IL: The University of Chicago Press.

Drapeau, P. (2014). *Sparking student creativity: Practical ways to promote innovative thinking and problem solving*. Alexandria, VA: Association for Supervision and Curriculum Development.

Dudley, P., Xu, H., Vermunt, J.D., & Lang, J. (2019). Empirical evidence of the impact of lesson study on students' achievement, teachers' professional learning and on institutional and system evolution. European Journal of Education 54(2), 202-217.

DeLuca, C., Bolden, B., & Chan, J. (2017). Systemic professional learning through collaborative inquiry: Examining teachers' perspectives. Teaching and teacher education, 67(1), 67-78.

Dufour, R. & Marzano, R. J. (2011). *Leaders of learning: How district, school, and classroom leaders improve student achievement*. Bloomington, IN: Solution Tree Press.

Dweck, C. S. (2006). *Mindsets: The new psychology of success*. New York, NY: Ballantine Books.

Erbilgin, E. (2019). Two mathematics teacher educators' efforts to improve teaching and learning processes: An action research study. *Teaching and Teacher Education, 78*, 28-38.

Goldrick, L. (2016). *Support from the start: A 50 state review of policies on new educator induction and mentoring*. Santa Cruz, CA: New Teacher Center. https://newteachercenter.org/wp-content/uploads/2016CompleteReportStatePolicies.pdf

Gruemert, S. & Whitaker, T. (2015). *School culture rewired: How to define, assess, and transform it*. Alexandria, VA: Association for Supervision and Curriculum Development.

Hattie, J. A. C., & Donoghue, G. M. (2016). Learning strategies: a synthesis and conceptual model. *Science of Learning*. https://www.nature.com/articles/npjscilearn201613#citeas

Ingersoll, R. M.; Strong, M. (2011). The impact of induction and mentoring programs for beginning teachers: A critical review of the research. *Review of Educational Research, 81*(2), 201-233.

Jacob, B. A., & Lefgren, L. (2008). Can principals identify effective teachers? Evidence on subjective performance evaluation in education. *Journal of Labor Economics, 26*(1), 101-136.

Klein, S. S. (1985). ***Handbook for achieving sex equity through education***. Baltimore, MD: The Johns Hopkins University Press.

Knowles, M. S., Holton III, E. F. & Swanson, R. A. (2015). *The adult learner: The definitive classic in adult education and human resource development* (8th ed.). New York, NY: Routledge, Taylor & Francis Group.

Koutropoulous, A. (2011). Modernizing classical language education: Communicative language teaching & educational technology integration in classical Greek. *Human Architecture, 9*(3), 55-66.

Lenzi, M., Sharkey, J., Furlong, M. J., Mayworm, A., Hunnicutt, K., & Vieno, A. (2017). School sense of community, teacher support, and students' school safety perceptions. *American Journal of Community Psychology, 60*(3-4), 527-537.

Lovely, S., & Buffum, A.G. (2007). *Generations at school: Building an age-friendly learning community*. Thousand Oaks, CA: Corwin Press.

Lucas, S. R., & Beresford, L. (2010). Naming and classifying: Theory, evidence, and equity in education. *Review of Research in Education, 34*(1), 25-84.

McCutcheon, K., O'Halloranb, P., & Lohanb, M. (2018). Online learning versus blended learning of clinical supervisee skills with pre-registration nursing students: A randomized controlled trial. *International Journal of Nursing Studies, 82*, 30-39.

Meetze-Hall, M. (2018). *Educating educative mentors: Video as instructional too*l (191737512). [Doctoral dissertation, Concordia University—Portland]. ProQuest Dissertations and Theses Global.

Mitchell, D., Howard, B., Meetze-Hall, M (2017). The new teacher induction experience: Tension between curricular and programmatic demands and the need for immediate help. *Teacher Education Quarterly, 44*(2), 79-104.

Nye, B., Konstantopoulos, S., & Hedges, L.V. (2004). How large are teacher effects? *Educational Evaluation and Policy Analysis, 26*(3), 237-257.

Quintana, M. G. B., & Zambrano, E. P. (2014). E-mentoring: The effects on pedagogical training of rural teachers with complex geographical accesses. *Computers in Human Behavior, 30*, 629-636.

Sherin, M. G., & van Es, E. (2009). Effects of video club participation on teachers' professional vision. *Journal of Teacher Education, 60*(1), 20-37.

Simon, F., Kuczera, M. & Pont, B. (2007). No more failures: Ten steps to equity in education. *Education and Training Policy*. Retrieved from https://www.oecd.org/education/school/45179151.pdf

Sinnema, C., Sewell, A., & Milligan, A. (2011). Evidence-informed collaborative inquiry for improving teaching and learning. *Asia-Pacific Journal of Teacher Education, 39*(3), 247-261.

Sternberg, R. J., Jarvin, L., & Grugorenkio, E. L. (2009). *Teaching for wisdom, intelligence, creativity, and success*. New York, NY: Skyhorse Publishing.

Surrette, T. N., & Johnson, C. C. (2015). Assessing the ability of an online environment to facilitate the critical features of teacher professional development. *School Science and Mathematics, 115*(6), 260-270.

Tan, Y. S. M., & Caleon, I. S. (2016). Problem finding in professional learning communities: A learning study approach. *Scandinavian Journal of Educational Research, 60*(2), 127-146.

Countering Deficit Thinking About Neurodiversity Among General Education Teacher Candidates

A Case Discussion Approach

By Grinell Smith & Colette Rabin

Abstract

We have observed that many of the multiple-subjects teacher credential candidates in our program often reveal deficit views of autistic children. This report provides an example of how we help credential candidates learn to reframe deficit thinking about neurodiversity via the examination, discussion, and dramatization of a collection of dilemma-based case stories designed to help our students unearth preconceptions and engage in shared inquiry. One strength of this approach is that it asks candidates to develop specific and realistic plans of action, to adopt a care ethic requiring them to think and act from the perspective of the child, to think about the limits of their ability to differentiate, and to recognize that even with mainstreamed autistic children, as non-specialists our candidates may frequently

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find themselves out of their depth and in need of the expertise of more knowledgeable colleagues.

Overview

Our goal is to highlight the need for an increased focus on asset-based approaches to special education in general teacher preparation programs, specifically with regard to children diagnosed with Autism Spectrum Disorder Level 1 (ASD-1). As teacher educators with decades of experience teaching foundations, action research courses, and content methods courses, five years ago our chair asked us to teach our department's health and special education course, a challenge we accepted with reluctance because of our lack of formal immersion in the field of special education. To our chagrin, as we prepared to teach the course we found that much of the available materials and resources for teachers about children diagnosed with ASD seemed deficit-laden. This view was particularly heightened in the mind of one of us, whose 12-year-old daughter was recently diagnosed with ASD-1. However, the seeming presence of deficit ideology is perhaps not surprising given a systemic disproportionality of representation of the white and wealthy in GATE programs and, as counterpoint, over-representation of the poor and people of color in special education programs (Grissom et al, 2019; Grindal et al, 2019).

We fervently believe that the vast majority of special education specialists themselves do not hold deficit views of people diagnosed with ASD, nor do they mean to promulgate deficit views when they use clinical language (e.g. words and phrases like "delays," disorders," "warning signs," "risk factors," "severity of symptoms," "oversensitivity or undersensitivity to stimuli" and other terms common in the ASD clinical literature). However, we are concerned that our general credential candidates who typically lack both a clinical understanding of ASD and a well-honed ability to guard against deficit thinking may easily be misled by such language into adopting deficit views of autistic children.[1]

Perhaps not surprisingly, conversations with our students consistently reveal that many do indeed hold deficit views of autistic children. They tend to frame their descriptions of ASD in terms of deviations from "normal" in negative ways (e.g. *"Some autistic kids can't sit still like normal kids"* rather than *"Some autistic kids benefit from stimming in class."*) They also display common misunderstandings about ASD (e.g. speaking about the spectrum as though it represents a severity scale, as in *"He's a little bit on the spectrum"*), most of which we found to be underpinned, at least in part, by deficit ideology. Thus, we found it prudent to spend significant time and effort helping our students discard such views. However, as relative newcomers in the field of special education, we were not well prepared with specific approaches. Ultimately, we decided to repurpose a practice we have used to counter social, cultural, and linguistic deficit thinking to this context. Here, we provide an example of how we help candidates reframe how they think about neurodiversity.

Significance

We believe this practice has significance for teacher preparation and K-12 education in that it addresses a known challenge: the lack of special education training in the state's general education teacher preparation programs (Mader, 2017). In our multiple-subjects credential program, for example, which is one of the largest programs in the Bay Area, K-8 teacher candidates take only one course designed specifically to help them meet the needs of children with special needs (a topic that even in this course shares billing with health education). We see a significant opportunity to embed high quality special education approaches more firmly into currently existing general credential pathways by leveraging the focus on social justice and a stated commitment to embracing diversity that undergirds many California teacher preparation programs in the context of neurodiversity. Our hope is that this may help candidates reframe what to us seems to be a pervasive tendency to tolerate - or worse, adopt - a view of autistic children as "less than" that predictably develops when candidates are invited to view autistic children primarily in terms of how they deviate from neurotypicality.

Key Elements of Practice

The practice we describe here is designed to help candidates get at the roots of their deficit thinking via the examination, discussion, and dramatization of a collection of dilemma-based case stories we developed - short vignettes of school situations that defy simple solutions designed to unearth preconceptions and create opportunities for shared inquiry. (The vignette we share below is perhaps best suited to help candidates think about children diagnosed with ASD-1, the population of autistic children most likely to be 'mainstreamed.') Over the years in our other classes, we have successfully used case stories to help our students unearth preconceptions and engage in shared inquiry (Smith, 2012; Rabin, 2012; Rabin and Smith, 2013). We find that their utility accrues in part from the way they support students to adopt an ethic of care (Noddings, 1992, 2002, 2012), which requires engrossment of the one-caring in the concerns and perspective of the cared-for. Case stories also leverage insights from psychology that reveal that people are more likely to generalize from specific cases rather than to apply general concepts to specific contexts (see, for example, Nisbett & Bordiga, 1975).

Prior to introducing the case story, we begin by orienting our students to how children are diagnosed as autistic. Our students learn, for example, that a diagnosis of ASD is made only after an assessment of behavioral and family historical information by clinicians with special training in ASD diagnosis. Here, we explicitly counter narratives we hear all too often from our students who display alarmingly solid convictions about their students they identify as needing differentiation, reminding them that as teachers, their role is not to diagnose a child as autistic or not autistic. They learn, for example, that the commonly-used Autism Diagnostic Observation

Schedule (ADOS) is viewed by many as having "the strongest evidence base and highest sensitivity and specificity (Falkmer, et al., 2013, p. 329). They learn that ADOS test scores are produced by assigned scores to various behaviors in standardized contexts as compared to how a neurotypical child could be expected to behave, with a higher score associated with a greater divergence from neurotypicality. They learn that people diagnosed with ASD-1 are described as needing minimal levels of support with social communication, social interaction, restricted or repetitive behavior, interests, or activities, while people diagnosed with ASD-2 and ASD-3 need more significant support (APA, 2013; Masi et.al, 2017).

Teaching our students about diagnostic pathways and some of the ways autism manifests is important because it allows us to explore with our students how the two domains—diagnosis and instructional differentiation—while inter-related, are in many ways distinct. For example, while we are not positioned to critique diagnostic practices or the use of clinical jargon per se, we do posit that when people who lack training or clinical understanding of ASD (e.g. the majority of our multiple subject teacher candidates) encounter such jargon, unsurprisingly, they are likely to adopt a similar heuristic to think about how to teach autistic children. Namely, they ask, how does this kid deviate from "normal?" While such a heuristic has clear utility in clinical settings, we suggest that in the hands of novice educators, it poisons the well of their thinking because it invites them to uncritically adopt the dangerous tautology: 'typical' = 'preferable.'

Armed with an understanding of how autism is diagnosed, we then introduce our candidates to a case story we developed specifically to help them surface deficit thinking about one autistic child, summarized below:

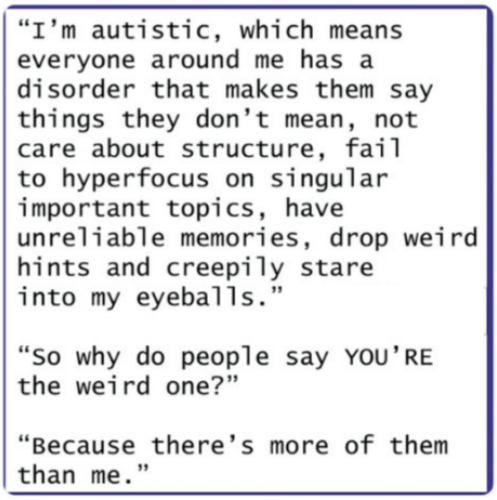
A Case Story: Anna and the Group Project

> Anna is an 8th grader in a mainstream class with a diagnosis of ASD-1. She tests as having normal to above-average intelligence and has an IEP designed to help her teachers make instructional accommodations to address her non-verbality, reticence to socialize with her classmates, issues related to sensory overload, and difficulty completing assignments in a timely manner. Her history teacher, Ms. Jenkins, a veteran with nine years' experience but with scant experience working with autistic girls with behavior similar to Anna's, has prepared a complex group project to explore the U.S. Constitution. Anna's parents have been helping her with the project at home, assisting with internet research and reading over her contributions to the group's shared Google Doc. Anna seems very invested in the project, so they are taken aback when they email Ms. Jenkins for clarification about assignment deadlines and receive this reply: "I'm glad you reached out. I'm concerned that Anna does not keep up with her group. She is in a group of kind, patient students, and I encourage her to listen in to the conversations at her table even if she doesn't want to speak up, but she seems to zone them totally out and try to work on her own. I'm okay with her making this decision, but it does mean that she will fall behind. I'm at a loss as to how to engage her more productively and would welcome any suggestions or advice you might have."

In discussions, when it is apparent that more details about Anna or the context are needed, we identify why we need the missing information and then invent details, adding them to the story. In this way, candidates are invited to think of Anna as a whole child, complete with unique abilities, particular struggles, and complex cognitive, communicative, social, and emotional ways of being. In one such discussion, borrowing an idea from an ASD workshop for mainstream teachers, we introduced an unsettling feature: one of us announced that every four minutes as they worked in their groups, we would drag our fingernails down the class chalkboard, but that they were to try not to be distracted by that. When, to no one's surprise, the majority of students could not ignore the chalkboard scratching, even when they knew in advance that it was going to occur, it opened a discussion of the nature of sensory overload, which led to insights about how difficult it must be for some autistic children in 'normal' classroom contexts, the extent of accommodations that might be warranted, and ultimately what 'normal' actually implies. This invariably leads to several "aha" moments about Anna's behavior—or more accurately, how challenging it is to accurately assign a motive to a particular behavior without a full awareness and understanding of how autistim shapes sensory experiences and intersects with cognition and behavior. In many cases, these insights seem to lead candidates more readily to adopt perspectives that Anna migh hold, and by extension, consider the perspectives of other autistic children. While closing one such discussion, for example, one candidate shared a meme from an r/autism subreddit (see Figure 1) that she thought showed how reframing one's perspective can help to reframe one's thinking.

Figure 1

A meme from an autism subreddit (r/autism) shared by a candidate that flips a stereotypical description of the behavior of some autistic children.



Conclusion

Countering candidates' tendencies toward deficit thinking is a well-documented challenge (Gay, 2019). There is increasing awareness that along with other kinds of diversity, neurodiversity is yet another prominent feature of the deficit-thinking landscape (Kapp, 2013). It is a feature we think needs more attention than teacher preparation programs typically give it, and we offer the practice of case-centered discussions featuring neurodiversity as a feasible way to help candidates in over-packed credential programs shine a light on their largely unexamined assumptions about the autistic children who will be in their mainstream classes. One strength is that it asks candidates to engage directly and overtly in what Sanger and Osguthorpe (2015) call the *moral work of teaching* as they plan and consider their differentiation strategies. Another strength is that it counters the vague and naive belief that simply 'believing in' and 'supporting students for who they are' will be sufficient to address their special needs—which are frequently substantial—because it asks candidates to develop specific and realistic plans of action, to adopt a care ethic requiring them to think and act from the perspective of the child, to think about the limits of their ability to differentiate, and to recognize that even with mainstreamed autistic children, as non-specialists they may frequently find themselves out of their depth and in need of the expertise of more knowledgeable colleagues.

Note

[1] We use the term "autistic child" rather than child diagnosed with ASD" out of deference to the 12-year-old we mentioned earlier, who prefers the phrase.

References

Falkmer, T., Anderson, K., Falkmer, M., & Horlin, C. (2013). Diagnostic procedures in autism spectrum disorders: a systematic literature review. *European Child & Adolescent Psychiatry, 22*(6), 329-340.

Gay, G. (2018). *Culturally responsive teaching*. New York, NY: Teachers College Press.

Grinal, T., Schifter, L., Schwartz, G., & Hehirr, T. (2019). Racial differences in special education identification and placement. *Harvard Educational Review, 89*(4), 525-553.

Grissom, J., Redding, C., & Bleiberg, J. (2019). Money over merit? Socioeconomic gaps in receipt of gifted services. *Harvard Educational Review, 89*(3), 337-369.

Kapp, S. K., Gillespie-Lynch, K., Sherman, L. E., & Hutman, T. (2013). Deficit, difference, or both? Autism and neurodiversity. *Developmental Psychology, 49*(1), 59.

Mader, J. (2017) How teacher training hinders special-needs students. *Atlantic*, March 1.

Masi, A., DeMayo, M. M., Glozier, N., & Guastella, A. J. (2017). An overview of autism spectrum disorder, heterogeneity and treatment options. *Neuroscience Bulletin, 33*(2), 183-193.

Nisbett, R. E., & Borgida, E. (1975). Attribution and the psychology of prediction. *Journal of Personality and Social Psychology, 32*(5), 932.

Noddings, N. (1992). *The challenge to care in schools*. New York, NY: Teachers College Press.

Noddings, N. (2002). *Educating moral people: A caring alternative to character education*. New York, NY: Teachers College Press.

Noddings, N. (2012). The caring relation in teaching. *Oxford Review of Education, 38*(6), 771-781.

Rabin, C., & Smith, G. (2013). Teaching care ethics: conceptual understandings and stories for learning. *Journal of Moral Education, 42*(2), 164-176.

Rabin, C., & Smith, G. (2012). Stories from five decades: how one teacher's theatricality, courage, and creativity shaped a life's work. *Action in Teacher Education, 34*(4), 381-391.

Sanger, M. N., & Osguthorpe, R. D. (2015). *The moral work of teaching and teacher education: Preparing and supporting practitioners*. New York, NY: Teachers College Press.

Smith, G. (2012). The way we educate: Twenty million miles for some, a twenty minute walk for others. *Schools: Studies in Education, 9*(1), 63-72.

Supporting and Making Evident the Practices of Teacher Education Supervisors

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Introduction

The study reported here resulted from a collaborative investigation across eight University of California teacher education programs (TEPs) to understand more fully the types of feedback and guidance supervisors provide to student teachers (STs) and interns (for the sake of simplicity both interns and student teachers will be referred to as STs in this paper). One of the essential components of teacher education is feedback. The amount, quality and content of feedback has been found critical for the development of STs (Berman, and Usery, 1966; Galea, 2012; Kent, 2001; Sağ 2008; Stimpson et al., 2000). However, little is known about the type, content, and nature of feedback that best supports beginning teacher development. Our work was loosely organized around the principles of continuous improvement and drew from the work of Bryk, Gomez, Grunow & LeMahieu (2017) to inform how we examined our programs and practices. This structure helped us look across our programs in a systematic way. While we did not establish a formal Networked Improvement Community (NIC), we saw our work as the first step in establishing a NIC.

The impetus for our work came from a new California Commission on Teacher Credentialing (CTC) requirement that supervisor observations of ST's provide data aligned to the California Teaching Performance Expectations (TPEs) that can be meaningfully aggregated in order to inform continuous improvement efforts, and to guide programmatic support for STs. This led TEPs to consider what types of data it would make sense to gather that could also measure student teacher progress and growth over time. Assuming a strong link between quality supervision and ST performance (Stricker, et al., 2016), we initiated a cross-campus study of supervision.

It is commonly accepted that the feedback and guidance that STs receive from their supervisors play a fundamental and significant role in the growth and progress candidates make (or not) while in a credential program. However, there is little research on the specific type and quality of 'moves' that supervisors make as they support STs in their clinical practice settings. Most supervisors in TEPs provide STs with verbal feedback and anecdotal notes following an observation. Many programs also use observation and evaluation tools that measure progress or mastery of the Teaching Performance Expectations (TPEs) at different points of the year. This study examined what STs and supervisors report is most meaningful to their work together and what types of training, professional development and support supervisors are receiving or would like to receive. The goal of this study was to uncover what, in many cases, are the hidden practices of supervisors and to identify common challenges and successes in supervision across the UC TEPs.

In general, research on clinical supervision has found that the supervision process can lead to positive changes in a teacher's instructional practice (Kagan, 1988). According to the California Commission on Teacher Credentialing (CCTC, 2017), teacher candidates are required to have access to clinical practice hours where they are working with and learning from "experienced" educators and

"have the support and guidance they need" to become effective educators (p. 2). Candidates also must receive proper supervision and guidance from program and district-employed supervisors during their clinical practice. But what does *proper supervision* mean? As a means towards understanding the supervision process, we wanted to explore the current landscape of supervision and definitions from the field of supervision and the role it plays in teacher preparation.

The California Commission on Teacher Credentialing does not provide an explicit definition of supervision, but does specify the qualifications a supervisor must hold. The CTC Common Standards (2015) specify that supervisors:

- are trained in supervision (p. 3)
- assess candidates during field experiences and clinical practice (p. 2, 4, 8)
- provide guidance as an experienced individual who has the knowledge and skills the candidate is working to attain (p. 6)
- are a qualified person that designs activities to assess a candidate in mastering the required knowledge, skills and abilities expected of the candidate (p. 5).

Acheson and Gall (1987) define supervision as, "the process of helping the teacher reduce the discrepancy between *actual* teaching behavior and ideal teaching behavior" (p. 27). Goodwin and Kosnik (2013) provide a knowledge taxonomy and suggest that teacher educators should understand these domains:

1. Personal knowledge/autobiography and philosophy of teaching;
2. Contextual knowledge/understanding learners, schools, and society;
3. Pedagogical knowledge/content, theories, teaching methods, and curriculum development;
4. Sociological knowledge/diversity, cultural relevance, and social justice; and
5. Social knowledge/cooperative, democratic group process, and conflict resolution.

It is often the case that supervisors are recruited and drawn from the ranks of retired teachers and administrators. In many university settings, methods instructors, experienced faculty and in some cases graduate students with teaching experience who are interested in teacher education also become part of the supervisor community. There is great variation in the experiences and knowledge about the supervision process amongst pools of supervisors. As noted by Koerner and Rust (2002), some supervisors come to the job having learned from a skilled mentor, whereas others may come with formal academic coursework related to supervision, and others may solely rely on their experiences as teachers and their own memories of student teaching.

Supervisors often serve as translators of the values and beliefs of the teacher education program, thus making it all the more important for programs to strategically identify and select supervisors that will provide mentorship that is aligned with their program's core values. Supervisors are tasked with finding a balance between the

practical and theoretical aspects of teaching. To what extent are supervisors aware of or have a clear understanding of the preparation programs guiding curriculum, practice and values and how are they using this knowledge to inform the feedback and support they are giving to STs?

Let us now turn to the supervision process. In *Mentoring and Supervision for Teacher Development* (1998), Reiman and Thies-Sprinthall assert that "the cornerstone of effective supervision is caring and *progressively collaborative teaching* between educators as developing adults" (p. 2). They maintain that a variety of individuals may be involved and referred to as supervisors or coaches. That is, supervision is less about a designated person in a supervisory role than it is about the kinds of activity that occur within a supervisory relationship.

In the 1950s, Morris Cogan originated clinical supervision as a discipline and emphasized that, "Supervision must operate within the school and depends on direct observation. Its objective is to encourage genuine collaboration in which there is not a superior-subordinate relationship, no assumption of the supervisors, *teaching the teacher*" (1973). Similar to Reiman and Thies-Sprinthall (1998), Cogan's definition supports the notion that teacher supervision is about a process that promotes collaboration, is rooted in building a relationship between two individuals as a means to obtain a common goal, and that this process must occur through direct experience that is real and relevant to the ST.

Upon examining various definitions of who supervisors are and what is meant when one engages in supervision, words commonly encountered include: advising, guiding, counseling, collaborating, modeling, coaching, evaluating and assessing. Ultimately, one can argue that teacher supervision is based on a relationship, typically one-to-one, and is systematic and purposeful.

In our TEPs we have informally adopted what is referred to as a "developmental instructional supervision" model. In this model, supervision is a formative process for refining and expanding the instructional repertoire that differentiates support and challenge according to an individual ST's learning and developmental needs (Reiman & Thies-Sprinthall, 1988). In this model, supervision is part of a reflective practice, where the role of the supervisor is more collaborative and facilitative, guiding the teacher candidate to become self-directed in his or her own learning (Strieker et al., 2016). Furthermore, in this specific approach, the supervisor adjusts his or her communication and style of interaction based on the adult and professional needs of the ST (Glickman et al., 2014). Rather than taking a summative approach to supervision, which implies a gatekeeping function, most TEPs emphasize a formative lens for teacher supervision. This is potentially where some tensions arise when supervisors are asked to collect data on STs.

The manner in which teacher preparation programs design, structure, and integrate supervision into the curriculum varies greatly. Currently there are few published guidelines for supervision, and furthermore little agreement on what constitutes good practice in fulfilling the supervisor role (Stimpson et al., 2000, p. 5). It is often

the case that supervisors base their practice largely on their own experiences gained through teaching, or observing lessons with other supervisors. Reiman and Thies-Sprinthall (1988) note that supervisors should commit themselves to adequate training and that this preparation should model effective theory, research, and practice. Furthermore, they suggest that supervisors should engage in formal coursework and guided practical experiences in the area of adult learning but provide little direction on what exactly training and coursework should address. Where training provided to university supervisors was examined, results proved to be successful and there were statistically significant differences in the manners in which trained supervisors facilitated and managed their roles (Gürsoy et al., 2013).

Kent (2001) argues that supervisors are too often provided with training that is inadequate, resulting in cooperating teachers and university supervisors alike gaining minimal support to supervise effectively. Common practice for preparatory programs is to offer a single orientation session, where some written materials may be distributed, but beyond that university supervisors ordinarily receive no specific preparation for their supervisory role. One cornerstone of optimal clinical supervision as discussed above is providing data and specific feedback to STs that will help drive and influence their practice, something that undoubtedly requires training, professional development and collaboration. Current training practices for clinical supervision are often rooted in assumptions about prior knowledge and experiences held by the supervisor (teaching experience, experience as an administrator).

There are however, some models and frameworks for supervision that have been developed and are being utilized by TEPs (Cogan, 1973; Reiman & Thies-Sprinthall,1988; Pajak, 2000). In one model (Cogan, 1973) there is an emphasis on having supervisors engage in a learning process in which they learn in tandem with the ST. This learning process is often a catalyst for change in professional knowledge, attitudes and skills for both participants. Other models of supervision focus more closely on how preparation programs align clinical practice and fieldwork experiences. For example, programs may be designed to maintain a tightly woven connection between what occurs in methods courses and the supervision process (Stimpson et al., 2000). In this model one of the goals is to maintain continuity and consistency in the pre-teaching practice, the teaching practice and post-teaching practice phases. Ensuring an ST receives supervision that consistently reinforces content taught in coursework seems like an important factor to consider carefully.

One approach to enhance consistency that Stimpson et al., (2000) offers up is that lesson observations should be perceived as part of a continuum rather than a one-off evaluating event and that direct connections and links are being made between site visits. Ultimately, despite which frameworks or models are used to guide the cycle of supervision, giving STs focused feedback directly related to their practice and rooted in theory that is supported by coursework has shown to result in increased levels of performance, and motivation (Kilminster & Jolly, 2000).

Milne, Aylott, Fitzpatrick and Ellis (2008) reviewed 24 studies of clinical teacher

supervision and proposed a basic model of supervision, which includes different supervisor interventions demonstrated to have positively influenced STs' practices. The following "mechanisms of change" emerged from their review: experiencing, reflecting, planning, conceptualizing, and experimenting (p. 181). They concluded that experiential learning played a central role in promoting change in instructional practice. Milne et al. (2008) found that there is no one common approach to the supervision cycle (p. 183); rather, many supervisors took a systematic approach that included teaching, modeling, rehearsal, and corrective feedback. The frameworks, models and approaches to supervision found in the literature emphasize the importance of the relational aspect of supervision.

Scholars who have studied the cycle of supervision have suggested that effective feedback is individualized, specific and focused, objective and nonjudgmental, delivered in a sensitive manner that promotes relationships, regular and ongoing, consistent, timely, maintains a positive tone and provides an opportunity for the recipient to respond, reflect and contribute (Drago-Severson and Blum-DeStefano, 1987; Galea, 2012; Zeichner and Liston, 1987). Building trusting relationships is at the foundation of creating an opportunity for feedback that drives growth. A dialogue based on objective observational data, which is then analyzed collaboratively will promote the STs development and growth (Acheson and Gall, 1987). An important and necessary precursor to impactful feedback is 'acceptance' from the ST and a trusting relationship with the supervisor. Approaches to developing this trust are not clearly articulated in the work reviewed.

There is insufficient research on best practices in supervision or relevant skills and dispositions necessary for supervisors to provide quality feedback and support to STs. There is a need to explore in greater depth how preservice programs use evidence to examine the effectiveness of their program's supervision model and what is being done to address areas where current practices of supervision are ineffective and/or successful in instilling the underlying principles and driving ideologies of the preparatory program.

Method

Teacher Education program directors and supervisors examined current supervision practices and policies, reviewed student teaching observation and evaluation protocols, conducted focus groups with STs (N=65) and supervisors (N=45), and surveyed supervisors (N=60). Our team also met for two-day in-depth meetings over two summers. These meetings and the discussions we had were invaluable in helping us establish a common problem of practice and analyze data collaboratively. For example, in the first summer meeting, each campus identified quotes and themes from their ST focus groups which they shared and we then refined these themes as a group and generated themes that arched across campuses. Following this the network team conducted a fishbone brainstorm (Bryk et al., 2017) and generated

a fishbone diagram which helped generate a problem statement. The problem of practice we identified was: *We are not able to consistently provide feedback and evaluation to STs that supports learning and development that also shows progress and growth over time and informs program improvement*. We also gathered information from across our TEPs about how we recruit supervisors, and the types of tools and resources we use to guide supervision.

The initial focus groups were conducted with STs in the spring quarter of 2017 to ask about the types of feedback they were receiving from their supervisors and the types of feedback they found most helpful. These focus groups were conducted by supervisors and faculty who were not currently working with the candidates. After reviewing and looking for themes from the ST focus groups we developed the protocol for the supervisor focus groups to build on what we had learned from STs. Focus groups with supervisors were conducted in the spring of 2018. Graduate students in our TEPs conducted the focus groups with our supervisors. All focus groups were recorded and transcribed. A survey was sent to all supervisors in our TEPs in the spring of 2018 to gather information related to how long they had been supervising, how many students they supervised, their prior experience, and the types of professional development they had received. All of the information from these sources was reviewed by our team. We used an inductive approach to identifying themes across the various data sources and created data tables and charts to capture the survey responses from supervisors.

Results

Five primary themes arose across our TEPs from reviewing the data from the ST focus groups. *Theme One: Relationships and trust are important*. Teacher candidates shared that the relationship between the teacher candidate and their supervisors became more personal and productive over time. Strong connections with supervisors resulted in strategic, open feedback. *Theme Two: Seeing growth and improvement over time is valuable*. Candidates valued the timely feedback they received, and appreciated that the process was formative and not summative in nature. *Theme Three: Building confidence while noticing areas for growth*. Candidates shared that their supervisors often provided tools and resources that were relevant to the challenges they were facing in their classrooms. They also described how the feedback helped them reflect on their own teaching practices and moves in the classroom. *Theme Four: Goal setting after observation helpful (specific target areas)*. Candidates believed the feedback and resources they got from their supervisors contributed to their growth. Some candidates indicated a need for more emphasis on specific and critical feedback and sharing discipline specific resources. *Theme Five: The majority of students felt supported*. The feedback provided by supervisors is meaningful and related to students' university course assignments, credentialing evaluation and the development of instructional skills.

In reviewing the supervisor focus group data and the open-ended responses to the supervisor survey four broad themes emerged with multiple sub-themes in each. These themes were: identifying needs and challenges, describing specific tensions, describing successes, and identifying specific strategies used to support STs. Additional information for each of the themes is described below.

Needs and Challenges—Supervisors identified the following areas as priority needs: Continued and ongoing training for supervisors in many areas including: content training, purposes and goals of supervision, EdTPA, TPEs, UDL, best practices for supervisors and sharing resources and ideas across TEPs. *Specific Tensions*—Supervisors identified some common tensions that arose in their work including: little or no formal training; STs all need different levels and types of support; lack of common notions of what 'good' teaching looks like; lack of time to collaborate with other supervisors and mentor teachers; providing supportive vs. evaluative feedback; quantity vs. quality of observations; lack of coherence across the TEP; mismatch between university coursework and fieldwork; not being viewed as experts or feeling valued; and the responsibilities required of university supervisors above and beyond conducting observations and providing feedback. *Successes*—Supervisors described the primary successes of their work as developing positive relationships with their STs, fellow supervisors and mentor teachers; seeing STs make progress over time, and drawing upon program values or missions to inform work. *Strategies Used*—Supervisors described specific approaches they used that were effective including using video recordings to support observations and promote ST self-reflection, providing different types of feedback and support over time, and collaborating closely with mentor teachers.

Data from the supervisor survey (beyond the open-ended data reported above) revealed that supervisors in our TEPs have a range of experience levels, number of STs they are working with and varying levels of training. When asked how many candidates they were supervising 35% said 4-6; 30% said 7-10; 22% said 1-3 and 12% said 11 or more. When supervisors were asked what their role was in the TEP beyond supervision 40% said that they were also lecturers; 33% said they had no role beyond supervision; 10% were faculty and the remaining supervisors were made up of graduate students and administrators. When asked how many years of K-12 teaching experience they had 77% of the supervisors responded that they had 11 or more years of experience; 15% had 4-6 years of experience; and 8% had 2-3 years of experience. Supervisors were asked how many years they had been supervising and this question had the widest range of responses with 27% having 11 or more years; 20% having 1-3 years; 18% respectively having 1 year or less and 4-6 years; and 16% having 7-10 years. The data from the survey revealed how supervisors have widely different years of experience, different backgrounds and are working with from 2 STs to more than 11 STs. All of these variations impact the types of support and professional development that supervisors may need across our TEPs.

Supervisors were also asked to identify specific areas in which they would

like to receive additional professional development and training. The areas that came up most frequently were having time to collaborate and share resources with other supervisors, hearing about the latest research on teaching and learning, using video as a tool, social justice approaches, universal design for learning, restorative justice and cognitive coaching. Supervisors were also asked in the survey what they enjoyed most about their work and the majority described the relationships they built with their STs and seeing the progress they made over time. Other highlights included collaborating with mentor teachers and feeling like they are contributing positively to the next generation of teachers.

Discussion

Our work revealed that collecting meaningful data on ST progress is complex and messy. Both STs and supervisors reported that the conversations and dialogue they have together and the relationships they build are the most important contributing factors to ST growth and progress. Some STs reported that receiving additional data on their progress would help them have a clearer understanding of how they can improve their practice. The implications of this study are that both STs and supervisors would benefit from more specific guidance and support in order to maximize the impact of the feedback and mentoring. Supervisors across our programs reported that they would like more professional development and more tools to guide their practice. Developing tools and resources that allow supervisors to communicate specific areas for improvement and areas of growth that also generate program wide data would be beneficial to the field.

Supervisors also identified a desire to collaborate with other supervisors regularly in order to share knowledge and learn. There are many common problems of practice that could be addressed more effectively through collaboration and sharing resources and ideas across TEPs. It is clear that supervision of STs is an area ripe for additional research and examination in order to ensure that our candidates are receiving the best possible mentorship and guidance. We learned that this is an overlooked area of focus for program improvement efforts. Currently, the majority of supervisors working in our programs expressed that they had little or no training before taking on their work as supervisors. Supervisors also identified specific target areas for professional development and learning. Although we learned that overall, supervision is providing crucial feedback to STs we believe that there is room for improvement in order to provide high quality mentorship to our candidates. This collaboration with supervisors from across our programs is a first step in this direction and we plan to advocate for statewide and national collaborations amongst supervisors to start a dialogue and encourage professional growth.

Implications of the work include a recognition that supervisors need dedicated time to collaborate and share resources both within and across TEPs. In addition, it seems that the field would benefit from more clearly delineated frameworks

and models of best practices for supervisors in order to provide STs meaningful feedback and resources that support them in becoming change agents and future teacher leaders.

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References

Acheson, K. A., & Gall, M. D. (1987). *Techniques in the clinical supervision of teacher. White falin*. New York, NY: Long Man.

Bryk, A. S., Gomez, L. M., Grunow, A., & LeMahieu, P. G. (2015). *Learning to improve: How America's schools can get better at getting better*. Cambridge, MA: Harvard Education Press.

Berman, L. M., & Usery, M. L. (1966). *Personalized supervision: Source and insights*.

California Commission on Teacher Credentialing (CTC). (2017). *Guidance on clinical practice and supervision of preliminary multiple subject and single subject teaching candidates*. Obtained from: https://www.ctc.ca.gov/docs/default-source/educator-prep/pdf/clinical-practice-guidance.pdf?sfvrsn=9cf257b1_8.

California Commission on Teacher Credentialing. (2015). *Common standards*. Obtained from: https://www.ctc.ca.gov/docs/default-source/educator-prep/standards/common-standards-2015-pdf.

Cogan, M.L. (1973). *Clinical supervision*. New York, NY: Houghton Mifflin.

Drago-Severson, E., Blum-DeStefano, J., & Asghar, A. (2013). *Learning for leadership*. Thousand Oaks, CA: Corwin Press.

Galea, S. (2012). Reflecting reflective practice. *Educational Philosophy and Theory, 44*(3), 245-258.

Glickman, C. D., Gordon, S. P., & Ross-Gordon, J. M. (2013). *Supervision and instructional leadership: A developmental approach*. New York, NY: Allyn & Bacon/Longman Publishing.

Goodwin, A. L., & Kosnik, C. (2013). Quality teacher educators= quality teachers? Conceptualizing essential domains of knowledge for those who teach teachers. *Teacher Development, 17*(3), 334-346.

Gürsoy, E., Bulunuz, N., Baltacı-Göktalay, S., Bulunuz, M., Kesner, J., & Salihoglu, U. (2013). Clinical supervision model to improve supervisory skills of cooperating teachers and university supervisors during teaching practice. *HU Journal of Education*, Özel sayı, 1, 191-203.

Kent, S. I. (2001). Supervision of student teachers: Practices of cooperating teachers prepared in a clinical supervision course. *Journal of Curriculum and Supervision, 16*(3), 228-44.

Kagan, D. M. (1992). Professional growth among preservice and beginning teachers. *Review of Educational Research, 62*(2), 129-169.

Kilminster, S. M., & Jolly, B. C. (2000). Effective supervision in clinical practice settings: a literature review. *Medical Education, 34*(10), 827-840.

Koerner, M., & Rust, F. O. (2002). Exploring roles in student teaching placements *Teacher Education Quarterly*, 29(2), 35-58.

Reiman, A. J., & Thies-Sprinthall, L. (1998). *Mentoring and supervision for teacher development*. New York, NY: Addison Wesley Longman.

Milne, D., Aylott, H., Fitzpatrick, H., & Ellis, M. V. (2008). How does clinical supervision work? Using a "best evidence synthesis" approach to construct a basic model of supervision. *The Clinical Supervisor, 27*(2), 170-190.

Pajak, E. (2001). Clinical supervision in a standards-based environment: Opportunities and challenges. *Journal of Teacher Education, 52*(3), 233-243.

Reiman, A. J., & Thies-Sprinthall, L. (1998). *Mentoring and supervision for teacher development*. New York, NY: Addison Wesley Longman.

Sag, R. (2008). The expectations of student teachers about cooperating teachers, supervisors and practice schools. *Eurasian Journal of Educational Research, 32*, 117-132.

Stimpson, P., Lopez-Real, F., Bunton, D., Chan, D. W. K., Sivan, A., & Williams, M. (2000). *Better supervision better teaching: A handbook for teaching practice supervisors* (Vol. 1). Hong Kong, China: Hong Kong University Press.

Strieker, T., Adams, M., Cone, N., Hubbard, D., & Lim, W. (2016). Supervision matters: Collegial, developmental and reflective approaches to supervision of teacher candidates. *Cogent Education, 3*(1).

Zeichner, K., & Liston, D. (1987). Teaching student teachers to reflect. *Harvard Educational Review, 57*(1), 23-49.

Additional Scheduled Presentations

Following are titles and the accepted presenters for four additional research studies which were selected via peer review for the CCTE Spring 2020 SPAN Conference program.

Partnering to Improve Teacher Education:
Transforming Teacher Induction
Through University and District Partnerships
Tanya Flushman, Sarah Hegg, & Megan Guise
California Polytechnic State University, San Luis Obispo

Towards a Meaningful Partnership
Between Ethnic Studies and Teacher Preparation Faculty:
Securing Qualified Ethnic Studies Teachers for California Schools
Theresa Montano
California State University, Northridge

Preparing Teachers for Multi-Lingual Students:
A Networked Improvement Community of Teacher Educators
Across Eight University of California Teacher Education Programs
Carlos Sandoval & Virginia Panish
University of California, Irvine

Preparing Teacher Educators:
Foundational Work for California
Kip Tellez
University of California, Santa Cruz

Information on the California Council on Teacher Education

Founded in 1945, the California Council on the Education of Teachers (now the California Council on Teacher Education as of July 2001) is a non-profit organization devoted to stimulating the improvement of the preservice and inservice education of teachers and administrators. The Council attends to this general goal with the support of a community of teacher educators, drawn from diverse constituencies, who seek to be informed, reflective, and active regarding significant research, sound practice, and current public educational issues.

Membership in the California Council on Teacher Education can be either institutional or individual. Colleges and universities with credential programs, professional organizations with interests in the preparation of teachers, school districts and public agencies in the field of education, and individuals involved in or concerned about the field are encouraged to join. Membership entitles one to participation in semi-annual spring and fall conferences, receipt via email in PDF format the journals *Teacher Education Quarterly* and *Issues in Teacher Education*, emailed newsletters on timely issues, an informal network for sharing sound practices in teacher education, and involvement in annual awards and recognitions in the field.

The semi-annual conferences of the California Council on Teacher Education, rotated each year between sites in northern and southern California, feature significant themes in the field of education, highlight prominent speakers, afford opportunities for presentation of research and discussion of promising practices, and consider current and future policy issues in the field.

For information about or membership in the California Council on Teacher Education, please contact: Alan H. Jones, Executive Secretary, California Council on Teacher Education, 3145 Geary Boulevard, PMB 275, San Francisco, California 94118; telephone 415/666-3012; email alan.jones@ccte.org; website www.ccte.org

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