



Research Article

Special Education Teachers in Residence: New Teachers for the Prairie

Marj Bock, EdD. Special Education Department, Emporia State University

email: mbock1@emporia.edu

Mari Caballero, PhD. Special Education Department, Emporia State University

email: mflake@emporia.edu

Kelly O'Neal-Hixon, PhD. Special Education Department, Emporia State University

email: koneal@emporia.edu

Abstract

Rural schools face unique challenges recruiting teachers. Rural school administrators report difficulties finding qualified applicants. Unique challenges rural special education teachers face, e.g., working with a more diverse group of students including those with significant disabilities, heighten the difficulties rural administrators experience when recruiting and retaining qualified special education teachers. Leveraging university/rural school partnerships, e.g., resident teacher university/school partnerships, can help rural schools recruit and retain qualified special education teachers. This article reports a self-study of Teachers College Special Education Fellowship Program (TCSEFP), a virtual residency in teaching program. The data support the benefits of the TCSEFP for special education teacher recruitment and teacher training for first year special education teachers teaching with a provisional endorsement. The data also support the development of virtual university/school partnerships.

In September of 2017 the Kansas State School Board learned that there were 82 special education teacher vacancies across the state. Approximately 25% of the state's 286 school districts reported teacher shortages. These teaching vacancies occurred in certain areas throughout the state (Bisaha, 2018). They clustered in southwestern Kansas, south central Kansas (two remote, rural Kansas regions), and two urban school districts (Wichita and Kansas City).

A survey of school superintendents found that the main reason positions remained unfilled was lack of applicants. Seven out of 10 positions remained

vacant either because there were no applicants, or the applicants did not meet the state standards (Bisaha, 2018). Further, there had been a flat growth rate in new teacher licenses and endorsements from 2016 to 2018 (Bisaha, 2018). Consequently, schools had increased reliance on waivers to hire teachers who did not meet state standards. From 2016 through 2018 the numbers of waivers issued by the Kansas State Department of Education increased from 161 to 353 (Bisaha, 2018). Mischel Miller, the state teacher licensure and accreditation director identified fully staffing Kansas rural schools as the hotbed issue for the

Kansas Department of Education (Deines, 2017). The shortage of special education teachers is not unique to Kansas. Nationally, in 2020-2021, 48 states reported special education teacher shortages (Buttner, 2021). This shortage is fueled by high special education teacher turnover rates of 12.3%, twice that of general education teacher turnovers (Buttner, 2021). Lambert (2020) cited three reasons special education teachers leave the field: (a) overwhelming workload, (b) little support for high needs students, and (c) demanding parents. An additional factor contributing to the special education teacher shortage is the decrease in teacher education programs throughout the nation (Gonzalez, 2020).

Rural schools, i.e., schools with fewer than 600 students located in towns with less than 2500 people located at least five miles from an urbanized area (Rural School and Community Trust, 2013), face unique challenges when recruiting teachers. As Berry, Petrin, Gravelle, and Farmer (2012) note, rural school administrators throughout the nation report difficulties finding applicants or finding qualified applicants. Thus, Kansas' rural administrators' experiences conform to the national norms. Berry et al. (2012) note several other contributing factors: (a) Rural special education teachers work with a more diverse group of students, e.g., students with autism, students with learning disabilities, students with emotional and behavioral disorders, students with intellectual disabilities, students with visual impairments; (b) rural special education teachers often work with students in multiple settings, e.g., inclusive classrooms, resources rooms, self-contained classrooms; and (c) rural special education teachers often work with fewer support services personnel, e.g., additional special education teachers, occupational therapists. Consequently, there are unique challenges related to recruitment of rural special education teachers. However, it is not all about recruitment. Retention is of equal importance. Again, rural schools experience unique challenges related to retention of special education teachers. Because rural

special education teachers often function as generalists who need to work with a wide range of students in a wide range of settings and are often hired while working on a waiver without meeting state standards, professional development is a key component related to their retention. Berry et al. (2012) identified several professional development areas of need for rural special education teachers: (a) Working with paraprofessionals and parents, (b) working with students with low incidence disabilities, (c) working with students with emotional and behavioral disorders, (d) skills in classroom management, (e) skills in collaboration and inclusion practices, and (f) curriculum content area instruction.

How do rural schools respond to the aforementioned? Sindelar, Pua, Fisher, Peyton, Brownell and Mason-Williams (2018) identified several strategies rural schools could use to address special education teacher shortages: (a) Leverage teacher preparation programs, (b) optimize teacher supports through technology, and (c) promote smarter incentives. They note that rural schools prefer local over out-of-area or out-of-state applicants perhaps because the local candidates understand the community and the "rural culture." In addition, applicants tend to look for teaching positions close to where they went to high school or where they student taught. Sindelar et al. (2018) note that by leveraging partnerships with teacher preparation programs, rural schools can serve as field experience sites for university students. This gives the university student and the rural school a chance to "test run" the teaching situation to see if it is a fit. In addition, university/rural school partnerships, e.g., residency in teaching partnerships (Guha et al., 2017a; Guha et al., 2017b; Han & Doyle, 2013) bring university resources to the rural school. This can be very helpful for novice special education teachers who benefit greatly from quality mentoring programs during their early careers. Similarly, these partnerships help university teacher preparation programs better understand rural issues. This will lead to curriculum revision to better meet the teacher preparation needs of

rural schools. These partnerships will flourish via distance technologies. And finally stronger incentives include higher salaries, tuition for university coursework, reduced housing costs, moving expenses, and so forth.

Purpose and Research Questions

The purpose of this article is to report a self-study of the Teachers College Special Education Fellows Program (TCSEFP), an 11-month, virtual graduate special education program developed to prepare special education teachers to work in rural schools throughout Kansas. The self-study questions included: (a) Will participants in an accelerated, virtual special education teacher preparation program develop the requisite knowledge and skills to support the educational performance of K-12 students with high incidence disabilities? (b) Will an 11-month residency in teaching program lead to higher rates of special education teacher recruitment and retention in rural schools? and (c) How satisfied are participants after program completion?

Methods

Design

This study used a qualitative research methodology, the self-study methodology (Alan, 2016). When conducting self-studies, university professors explore and analyze their practice through ongoing, systematic data collection, analysis, and reflection. The authors selected self-study methodology for this study to evaluate the overall efficacy of an 11-month virtual residency in teaching program for first year special education teachers with general education teaching licenses who were hired to teach special education as they completed the high incidence special education endorsement.

Participants

Twenty-two first-year special education teachers, i.e., the fellows, participated in this study. Each had a general education teaching license at the elementary, middle school, or secondary level. Three had prior general education teaching

experience. However, none had recent teaching experience. Two taught in an elementary general education classroom 12 to 15 years before study participation. One taught in a secondary general education classroom 33 years prior to study participation. The remaining 19 had recently graduated from an undergraduate teacher education program. The state department of education issued each a provisional special education teaching endorsement in October as they began teaching special education. Twenty-one participants had a GPA of 3.0 or higher (mean of 3.87, range of 3.0 to 4.0 on a 4.0 scale) on the final 60 credit hours of undergraduate coursework. One participant had an undergraduate GPA of 2.42 on the final 60 credit hours of undergraduate coursework; however, this participant had a significant hearing impairment and achieved this undergraduate GPA with no disability supports. Consequently, university faculty admitted the participant into the program based upon the participant's interview, their special education director's recommendation, and the university's disability support center. The faculty expected that with appropriate disability supports, this applicant would meet the academic rigor of the TCSEFP. The participants included two males and 20 females, two Latino and 20 Caucasian, who ranged from 22 to 62 years of age.

Teachers College Special Education Fellows Program

The key components of the Teachers College Special Education Fellows Program (TCSEFP) (Bock & O'Neal-Hixson (2016), a residency in teaching program, included: (a) virtual program delivery, (b) accelerated coursework, (c) virtual and on-site mentors, (d) tuition stipends, and (e) virtual university/school partnerships.

Virtual Program Delivery

The TCSEFP relied solely on virtual delivery. University faculty met with partner administrators, mentors, and fellows virtually throughout the program via video conferencing. University faculty completed practicum supervision and

observations in real time via video conferencing. Fellows completed all graduate coursework via an online course platform. All other communication occurred via email and phone.

Accelerated Coursework

Our 24-credit-hour graduate high incidence special education endorsement program includes eight 3-credit-hour courses including two 3-credit-hour practicums. The fellows completed this program in 11 months rather than the typical 24-30 months. They completed four of the eight endorsement courses during the summer term before they began teaching. They completed the four remaining courses during their first-year teaching, i.e., two courses during the first half of the year and two courses during the second half of the year. Summer courses included: (a) Characteristics of Students with High Incidence Disabilities, (b) Seminar in Behavior Management, (c) Promoting Literacy in Students with High Incidence Disabilities, and (d) Assessment in Schools. Fall semester courses included: (a) Strategies for Students with High Incidence Disabilities and (b) High Incidence Practicum I (i.e., either elementary or secondary level). Spring semester courses included: (a) Consultation/Collaboration and (b) High Incidence Practicum II (i.e., either elementary or secondary level). They began coursework in mid-June and completed it in mid-May.

Virtual and On-Site Mentors

The TCSEFP provided two mentors for each fellow. University faculty served as mentors for each fellow. Their mentoring focused on advisement, professionalism, and career goals. This mentoring occurred virtually. In addition, each fellow had an on-site mentor, an experienced special education teacher. The on-site mentors had a special education endorsement and a minimum of five years special education teaching experience. School district administration nominated experienced special education teachers to serve as on-site mentors. University faculty approved and trained them. On-site mentors provided on-the-job mentoring for the fellows. They helped

fellows: (a) set up their classrooms, (b) review Individual Education Plans (IEPs) for all students on their caseloads, (c) administer assessments, (d) develop lesson plans derived from IEP goals and objectives, (e) prepare for and participate in IEP meetings, (f) complete functional behavioral assessments (FBAs), (g) implement and evaluate behavior intervention plans (BIPs), (h) supervise paraeducators, and (i) adhere to school building policies and procedures. In addition, the on-site mentors served as liaisons between the university and the school to assure ongoing communication and close coordination between both partners. On-site mentors received a \$1,000 stipend paid by the university. Each fellow paid a \$125 access fee for each of the eight courses they completed. This access fee paid the mentor stipends. [For more information about the TCSEFP mentor model, see Bock, Caballero, and O'Neal-Hixson (2020).]

Tuition Stipends

The TCSEFP provided tuition stipends for each fellow. The tuition stipends paid graduate tuition for the endorsement courses as well as the \$125 access fee for each course. These stipends came from three sources: (a) Kansas Teacher Education Grant (Bock & O'Neal-Hixson, 2016), (b) Federal TEACH Grant (U.S. Department of Education, 2021), and (c) Emporia State University (ESU) Special Education Scholarships. The grants paid tuition for seven of the eight courses and the access fee for all eight courses. The ESU Special Education Scholarship paid tuition for one course.

Virtual University/School Partnerships

As a residency in teaching program (Coffman & Patterson, 2014), the TCSEFP relied upon strong university/school partnerships. Working together, university faculty and school administrators: (a) created the on-site mentor handbook and training modules, (b) aligned practicum activities with special education teaching activities, (c) identified potential program participants, (d) identified potential on-site mentors, (e) evaluated program efficacy, and (f) revised the TCSEFP as needed. In addition, university faculty provided resources and

virtual consultation support for K-12 students with challenging learning problems, e.g., dyslexia, challenging behaviors, e.g., self-injurious behavior, or complex disabilities, e.g., autism spectrum disorder.

Program Assessments

This self-study utilized regular high incidence accreditation program assessments (Bock, 2020): (a) Praxis II Special Education: Core Knowledge and Mild to Moderate Applications (0543/5543) (Educational Testing Service, 2021), (b) Final Practicum Evaluation Rating Scale, (c) IEP Lesson Plan Activity, (d) Direct Instruction/Universal Design for Learning Literacy Lesson Plan Project, (e) Functional Behavioral Assessment/Behavior Intervention Plan Project, and (f) Family and Community Engagement Project.

Praxis II Special Education: Core Knowledge and Mild to Moderate Applications (0543/5543)

Preservice or Inservice teachers who plan to teach students with mild to moderate disabilities at any grade level from preschool through grade 12 complete the Special Education: Core Knowledge and Mild to Moderate Applications (0543/5543) test. It addresses five content areas: Development and Characteristics of Learners (approximately 14%), Planning and the Learning Environment (approximately 17%), Instruction (approximately 17%), Assessment (approximately 14%), and Foundations and Professional Responsibilities (approximately 13%). The 90 multiple-choice questions assess the knowledge and understanding of principles and practices related to provision of special education services for students with mild to moderate disabilities. It also contains three constructed-response questions that assess knowledge of students with mild to moderate disabilities as related to instruction and assessment, learning environment and classroom management, and collaboration. Score range for this test is 100 to 200 (Educational Testing Service, 2021).

Final Practicum Evaluation Rating Scale

This rating scale contains 32 items clustered into

eight categories. These are tightly aligned with the Kansas State Department of Education special education teacher preparation program standards. Each item is rated on a scale from 1 to 5: (a) Level 1 Unsatisfactory (little or no skill development), (b) Level 2 Beginning (minimal knowledge and skills), (c) Level III Developing (below proficiency standards), (d) Level 4 Proficient (meets standards), and (e) Level V Exemplary (exceeds standards). Levels 4 and 5 are passing scores. The fellow's mentor and building principal completed the rating scale and as the fellows completed Supervised Practicum II and submitted them to the university practicum instructor who averaged them to create a composite score. Each fellow must earn a composite score of 4 or higher to pass the practicum.

IEP Lesson Plan Activity

Fellows completed the IEP Lesson Plan Activity during SD 708/709 Supervised Practice I, High Incidence (elementary or secondary level, respectively). For this activity, they develop, implement, and evaluate a lesson plan aligned to one of their student's Individual Education Plans. This activity is evaluated using a scoring rubric closely aligned with the correlating Kansas Department of Education high incidence special education training program standard. Passing scores for this activity fall within the "acceptable" or "target" ranges of 80 to 94% or 95 to 100%, respectively.

Direct Instruction/Universal Design for Learning Literacy Lesson Plan Project

Fellows completed the Direct Instruction/Universal Design for Learning (DI/UDL) Literacy Lesson Plan Project (Parts A, B & C) during SD 808 Supervised Practice, Elementary High Incidence II or SD 809 Supervised Practice, Secondary High Incidence II after completing the 75% or more of the high incidence endorsement courses. This project is divided into three parts: Part A Reading and Writing Literacy, Part B Mathematics Literacy, and Part C Content Area Literacy. All are assessed in content area instruction. For this project, fellows

completed the following six interrelated activities: (a) identification of students, (b) baseline data collection, (c) DI/UDL literacy lesson plan development, (d) DI/UDL literacy lesson plan implementation, (e) DI/UDL literacy lesson plan progress monitoring report, and (f) professional reflection paper. This activity is evaluated using a scoring rubric closely aligned with the correlating Kansas Department of Education high incidence special education training program standard. Passing scores for this activity fall within the “acceptable” or “target” ranges of 80 to 94% or 95 to 100%, respectively.

Functional Behavior Assessment/Behavior Intervention Plan Project

Fellows completed the Functional Behavior Assessment/Behavior Intervention Plan (FBA/BIP) Project during SD 802 Seminar in Behavior Management. For this project, candidates will complete a Functional Behavior Assessment, develop a Behavior Intervention Plan that includes Positive Behavioral Interventions and Supports (PBIS) within the Multi-Tier System of Support (MTSS) framework that demonstrates cultural sensitivity and promotes the self-determination skills of the student, write a professional quality report, and write a 2-page reflection with the following sections: (a) functional behavior assessment, (b) behavior intervention plan, (c) evaluation, and (d) reflection. This activity is evaluated using a scoring rubric closely aligned with the correlating Kansas Department of Education high incidence special education training program standard. Passing scores for this activity fall within the “acceptable” or “target” ranges of 80 to 94% or 95 to 100%, respectively.

Family and Community Engagement Project

Fellows completed the Family and Community Engagement Project during SD 799 Consultation/Collaboration. For this project, fellows worked with a family that includes a child with a high incidence disability. Candidates will complete the following three activities for this project: (a) family observation during IEP meeting,

(b) family interview following IEP meeting, (c) write family and community engagement paper. This activity is evaluated using a scoring rubric closely aligned with the correlating Kansas Department of Education high incidence special education training program standard. Passing scores for this activity fall within the “acceptable” or “target” ranges of 80 to 94% or 95 to 100%, respectively.

Participant Satisfaction Surveys

To solicit participant satisfaction evaluation data for the TCSEFP, university faculty and school administrators created three surveys: (a) TCSEFP fellows' evaluation survey, (b) TCSEFP mentors' evaluation survey, and (c) TCSEFP administrators' evaluation survey. Each has 12 items rated using a 5-point Likert scale (i.e., strongly disagree, disagree, neutral, agree, and strongly agree). Participants completed the survey once month following program completion.

Results

TCSEFP self-study results evaluate fellows' knowledge and skill development, participant satisfaction with the TCSEFP, and the effect of TCSEFP on recruitment and retention of special education teachers for rural K-12 schools. The following instruments or assessment projects evaluated fellows' knowledge and skill development: (a) Praxis II Special Education: Core Knowledge and Mild to Moderate Applications (0543/5543) (Educational Testing Service, 2021), (b) IEP lesson plan activity, (c) DI/UDL literacy lesson plan project, (d) FBA/BIP project, and (e) Family and community engagement project. In addition, the Final Practicum Evaluation Rating Scale assesses fellows' skills working with K-12 students with high incidence disabilities. Further, the following instruments evaluated participants' satisfaction with the TCSEFP program: (a) Fellow TCSEFP Evaluation Survey, (b) Mentor TCSEFP Evaluation Survey, and (d) Special Education Director TCSEFP Evaluation Survey.

Knowledge and Skills Assessments

Praxis II Special Education: Core Knowledge and Mild to Moderate Applications (0543/5543). The Praxis II

(0543/5543) data provided in Figure 1 indicate that 100% of the 2016-2020 fellows passed all Praxis II (0543/5543) subtests. See Table 1 for means and ranges for each subtest 2016-2020. Of note, during 2016 through 2020, 24 out of 24 (100%) ESU mean subtest scores were higher than national mean subtest scores. 13 out of 24 (54.17%) ESU mean subtest scores were higher than state mean subtest scores.

Final Practicum Evaluation Rating Scale. From 2016-2020, school district administrators and TCSEFP mentors completed a Final Practicum Evolution Rating Scale for 22 fellows as they completed the second practicum. This form contains 32 items aligned with eight program standards. Refer to Table 2 to see mean scores and ranges for each standard from 2016 through 2020. Overall, 22 of 22 fellows (100%) scored in the target range for each of the Kansas State Department of Education High Incidence program standards.

IEP Lesson Plan Activity. Fellow performance on this assessment activity indicates that 100% of the Fellows score in the target range from 2016-2020 based on mean and range of 98.67 (range 95-100), 98.71 (range 95-100), 98.50 (range 96-100), and 99.26 (range 97-100) for 2016-2017, 2017-2018, 2018-2019, and 2019-2020, respectively.

DI/UDL Literacy Lesson Plan Project. Fellow performance on this assessment activity indicates that 100% of the Fellows score in the target range from 2016-2020 based on mean and range of 97.84 (range 95-100), 98.86 (range 96-100), 98.50 (range 96-100), and 98.75 (range 96-100) for 2016-2017, 2017-2018, 2018-2019, and 2019-2020, respectively.

FBA/BIP Project. Fellow performance on this assessment activity indicates that 100% of the Fellows score in the target range from 2016-2020 based on mean and range of 99.33 (range 97-100), 99.43 (range 98-100), 98.75 (range 96-100), and 99.25 (range 97-100) for 2016-2017, 2017-2018, 2018-2019, and 2019-2020, respectively.

Family and Community Engagement Project. Fellow

performance on this assessment activity indicates that 100% of the Fellows score in the target range from 2016-2020 based on mean and range of 98.17 (range 96-100), 99.29 (range 97-100), 100.00 (range 100-100), and 100.00 (range 100-100) for 2016-2017, 2017-2018, 2018-2019, and 2019-2020, respectively.

Participant Satisfaction Assessments

Fellow TCSEFP Evaluation Survey. Twenty-two fellows completed a 12-item fellow program evaluation survey. Overall, 18 of 22 Fellows (82%) strongly agreed with each item on the survey. Of these items, 22 of 22 Fellows (100%) strongly agreed with 3 of 12 (25%) items; (a) I had adequate support from my mentor in the program, (b) my mentor was available and easy to work with, and (c) the program was well structured regarding course sequence. One of 22 fellows (5%) rated 3 of 12 items (25%) as neutral: (a) My courses provided me with useful and relevant information for my field, (b) professors were up to date with new developments in the field, and (c) I received useful feedback on my assignments throughout my courses. Nevertheless, 21 of 22 Fellows (95%) either strongly agreed or agreed with each survey item thereby supporting their satisfaction with the residency in teaching program, the TCSEFP.

Mentor TCSEFP Evaluation Survey. Sixteen mentors completed a 12-item mentor program evaluation survey. Overall, 13 of 16 mentors (81%) strongly agreed with each item on the survey. Of these items, 16 of 16 mentors (100%) strongly agreed with 6 of 12 (50%) items; (a) Requirements for mentors were made clear and provided to me in verbal and written form, (b) professors/faculty in the program were available and easy to work with, (c) I had adequate support from program faculty/professors, (d) the mentor handbook provided all required forms, (e) the program was well structured in regard to training and program professors/faculty support, and (f) I was satisfied with the overall mentor program structure and workload. Two of 16 mentors (13%) rated 2 of 12 items (12.5%) as neutral: (a) The mentor Canvas website was easy to navigate and (b) the mentor

Table 1
Fellows' Praxis II Special Education: Core Knowledge and Mild to Moderate Applications (0543/5543) Sub scores

	2016-2017 (N=6)				2017-2018 (N=7)				2018-2019 (N=5)				2019-2020 (N=4)			
	ESU Mean Range	ESU Ave % Correct	State Ave % Correct	Nat'l Ave % Correct	ESU Mean Range	ESU Ave % Correct	State Ave % Correct	Nat'l Ave % Correct	ESU Mean Range	ESU Ave % Correct	State Ave % Correct	Nat'l Ave % Correct	ESU Mean Range	ESU Ave % Correct	State Ave % Correct	Nat'l Ave % Correct
^a Subtest I: Development and Characteristics of Learners	12.58 (10-15)	83.33	79.42	77.25	11.34 (6-15)	78.87	79.64	76.96	11.64 (8-15)	80.57	81.40	78.28	12.00 (8-15)	85.37	83.16	79.76
^b Subtest II: Planning and the Learning Environment	15.62 (15-19)	83.57	79.66	75.90	13.28 (9-18)	77.90	80.03	75.99	13.41 (16-19)	78.78	79.84	75.94	13.87 (10-16)	80.57	79.00	76.03
^c Subtest III: Instruction	14.78 (10-18)	80.88	79.03	77.67	13.00 (7-18)	78.38	81.27	77.38	14.29 (8-18)	81.80	80.71	77.38	14.20 (10-18)	81.27	80.83	76.96
^d Subtest IV: Assessment	10.84 (9-14)	77.63	74.59	71.33	10.74 (5-14)	77.40	75.59	72.35	10.27 (6-14)	75.36	74.84	71.90	10.79 (7-14)	72.24	72.54	71.03
^e Subtest V: Foundations and Professional Responsibilities	1171 (8-16)	78.49	79.06	75.02	11.06 (6-16)	78.38	81.27	77.38	12.18 (4-16)	80.04	77.90	75.10	12.08 (10-15)	80.35	81.99	78.99
^f Subtest VI: Integrated Constructed Response Questions	10.76 (7-18)	66.82	67.81	65.52	11.82 (6-18)	69.29	69.96	65.98	11.96 (6-15)	68.53	69.58	66.48	12.54 (9-17)	68.67	67.00	65.66

^aSubtest I assesses KSDE HI Standard 1: The special educator understands the historical and philosophical foundations of special education, the characteristics of the disability, the impacts of the disability on education, and the legal parameters appropriate for each learner's educational needs.

^bSubtest II assesses KSDE HI Standard 4: The special educator uses a variety of evidence-based instructional strategies; including effective adaptations, learner performance, and transitions; to promote learning and improve learner outcomes.

^cSubtest III assesses KSDE HI Standard 3: The special educator uses Individual Educational Programs (IEPs), learning environments, individual learner characteristics, assessment, teacher knowledge of subject matter, and technology for effective instructional planning and implementation.

^dSubtest IV assesses KSDE HI Standard 2: The special educator uses a variety of assessment instruments, procedures, and technologies for learner screening, evaluation, eligibility decisions, instructional planning, progress monitoring, and technology considerations.

^eSubtest V assesses KSDE HI Standard 5 The special educator demonstrates effective communication skills to enhance collaboration and consultation among school professionals, to improve learner outcomes while planning for and implementing effective instruction and services; to implement the IEP, deliver instruction, and evaluate IEP implementation; and, to plan for and implement effective transition services.

^fSubtest VI assesses KSDE HI Standard 6 The special educator understands the critical elements of language and literacy; identifies and uses evidence-based interventions to meet the instructional needs specific to reading, writing, math, and other content areas; and includes the principles of universal design for learning and the use of technology to support literacy and to make data-based decisions.

Table 2
Resident Teachers' Final Practicum Evaluation Rating Scale Aligned with Kansas State Department of Education High Incidence Program Standards

	2016-2017 (N=6)				2017-2018 (N=7)				2018-2019 (N=5)				2019-2020 (N=4)			
	ESU Mean Range	ESU Ave % Target	ESU Ave % Accept	ESU Ave % Unaccept	ESU Mean Range	ESU Ave % Target	ESU Ave % Accept	ESU Ave % Unaccept	ESU Mean (Range)	ESU Ave % Target	ESU Ave % Accept	ESU Ave % Unaccept	ESU Mean Range	ESU Ave % Target	ESU Ave % Accept	ESU Ave % Unaccept
^b Total	97.47 (95-100)	100	0	0	97.56 (95-100)	100	0	0	97.92 (95-100)	100	0	0	98.03 (95-100)	100	0	0
Standard 1 Characteristics Legal Historical Philosophical	98.13 (96-100)	100	0	0	98.71 (96-100)	100	0	0	98.52 (96-100)	100	0	0	98.25 (96-100)	100	0	0
Standard 2 Assessment	98.59 (96-99)	100	0	0	98.59 (96-100)	100	0	0	99.13 (97-100)	100	0	0	98.96 (97-100)	100	0	0
Standard 3 Instructional Planning & Implementation	96.81 (95-100)	100	0	0	97.03 (95-100)	100	0	0	97.89 (96-100)	100	0	0	98.29 (96-100)	100	0	0
Standard 4 Evidence-based Instructional Interventions	96.03 (95-98)	100	0	0	96.43 (95-99)	100	0	0	96.75 (95-99)	100	0	0	96.25 (95-99)	100	0	0
Standard 5 Communication Collaboration	98.17 (96-100)	100	0	0	98.29 (96-100)	100	0	0	98.57 (97-100)	100	0	0	99.07 (98-100)	100	0	0
Standard 6 Language & Literacy	95.79 (95-98)	100	0	0	95.39 (95-98)	100	0	0	96.17 (95-99)	100	0	0	97.03 (95-100)	100	0	0
Standard 7 PBIS MTSS FBA/BIP	99.07 (98-100)	100	0	0	98.90 (97-100)	100	0	0	99.03 (97-100)	100	0	0	99.29 (97-100)	100	0	0
Standard 8 Family & Community Engagement	97.19 (95-100)	100	0	0	97.13 (96-100)	100	0	0	97.29 (95-100)	100	0	0	97.13 (95-100)	100	0	0

^aCompleted by two school district administrators as a final evaluation during SD 808 or SD 809 Supervised Practice, High Incidence (elementary or secondary, respectively). ^bPercent Correct at Target: 95-100, Acceptable: 80-94, & Unacceptable Level: Below 80

Table 3
Resident Teachers' Project Assessment Data

	2016-2017 (N=6)				2017-2018 (N=7)				2018-2019 (N=5)				2019-2020 (N=4)			
	ESU Mean Range	ESU Ave % Target	ESU Ave % Accept	ESU Ave % Unaccept	ESU Mean Range	ESU Ave % Target	ESU Ave % Accept	ESU Ave % Unaccept	ESU Mean Range	ESU Ave % Target	ESU Ave % Accept	ESU Ave % Unaccept	ESU Mean Range	ESU Ave % Target	ESU Ave % Accept	ESU Ave % Unaccept
IEP Lesson Plan Activity	98.67 (95-100)	100	0	0	98.71 (95-100)	100	0	0	98.50 (96-100)	100	0	0	99.25 (97-100)	100	0	0
DI/UDL Literacy Lesson Plan Project	97.83 (95-100)	100	0	0	98.86 (96-100)	100	0	0	98.50 (96-100)	100	0	0	98.75 (96-100)	100	0	0
FBA/BIP Project	99.33 (97-100)	100	0	0	99.43 (98-100)	100	0	0	98.75 (96-100)	100	0	0	99.25 (97-100)	100	0	0
Family & Community Engagement Project	98.17 (96-100)	100	0	0	99.29 (97-100)	100	0	0	100.00 (100)	100	0	0	100.00 (100)	100	0	0

Note: Percent Correct at Target: 95-100, Acceptable: 80-94, & Unacceptable Level: Below 80

Canvas website was up to date. Nevertheless, 14 of 16 mentors (88%) either strongly agreed or agreed with each survey item thereby supporting their satisfaction with the residency in teaching program, the TCSEFP.

Special Educator Director TCSEFP Evaluation Survey. Eight special education directors completed a 10-item special education director program evaluation survey. Overall, 4 of 8 special education directors (50%) strongly agreed with each item on the survey. Of these items, 8 of 8 special education directors (100%) strongly agreed with 6 of 10 (60%) items; (a) Overall, the residence in teaching programs Teachers College Special Education Fellows Program (TCSEFP) is well organized, (b) on-site mentoring for the fellows is a key component of the residence in teaching program, (c) virtual mentoring provided by professors/faculty for the fellows is a

key component of the residence in teaching program, (d) virtual university/school partnerships are a key component of the residence in teaching program, (e) virtual university consultation for low incidence disabilities (e.g., autism) is a key component of the residence in teaching program, and (f) overall, the residence in teaching program meets the need to provide highly qualified special education teachers for high needs regions in Kansas. One of 8 (12.5%) rated 1 of 10 items (10%) as neutral: (a) The residence in teaching program helped me retain special education teachers. Nevertheless, 9 of 10 special education directors (90%) either strongly agreed or agreed with each survey item thereby supporting their satisfaction with the residency in teaching program, the TCSEFP.

Table 4
Fellows' TCSEFP Evaluation Survey Data (N=22)

Questions	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
I had adequate support from professors/faculty in the program	91%	9%			
My faculty advisor was available and easy to work with	91%	9%			
I had adequate support from my mentor in the program	100%				
My mentor was available and easy to work with	100%				
My courses provided me with useful and relevant information for my field	86%	9%	5%		
Professors were up to date with new developments in the field	82%	13%	5%		
I received useful feedback on my assignments throughout my courses	86%	9%	5%		
General program requirements were made clear to me	91%	9%			
Requirements for practicum/internship were made clear and provided to me in verbal and written form	91%	9%			
The program was well structured in regard to class sequence	100%				
My course workload was manageable	86%	14%			
I was satisfied with the overall program structure and course load	91%	9%			

Table 5
Mentors' TCSEFP Evaluation Survey Data (N=16)^a

Questions	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Requirements for mentors were made clear and provided to me in verbal and written form	100%				
I had adequate training from professors/faculty in the program	94%	6%			
Professors/faculty in the program were available and easy to work with	100%				
I had adequate support from program faculty/professors	100%				
The mentor Canvas website was easy to navigate	81%	6%	13%		
The mentor Canvas website provided useful and relevant information	94%	6%			
The mentor Canvas website was up to date	81%	6%	13%		
The mentor handbook made mentor activities clear	94%	6%			
The mentor handbook provided all required forms	100%				
The mentor program was well structured with regard to training and program professors/faculty support	100%				
My mentor workload was manageable	94%	6%			
I was satisfied with the overall mentor program structure and workload	100%				

^a1 mentor worked with 3 fellows, 4 mentors worked with 2 fellows, 11 mentors worked with 1 fellow

Recruitment and Retention

As of October 2021, 18 out of 22 (81.82%) former fellows continue to teach special education in rural K-12 Kansas schools (Bock, 2021). Two have transferred from special education to general education teaching positions in their school districts. The other two have retired.

Discussion

The data indicate that, yes, the TCSEFP prepares highly qualified special education teachers to work with K-12 students with high incidence disabilities in rural school districts throughout Kansas. All fellows, i.e., 100%, passed the PRAXIS II Special Education: Core Knowledge and Mild to Moderate Application (0543/5543) (Education Test Service, 2021) earning a score of 155 or higher. In addition,

ESU fellows' average percentage correct per subtest is higher than the state average percentage correct per subtest for 54.17% of the subtest completed in 2016-2020. Further, ESU fellows' average percentage correct per subtest is higher than the national average percentage correct per subtest for 100% of the subtests completed in 2016-2020. Thus, Fellows' performance on this assessment underscores their knowledge and skill as relates to working with K-12 students with high incidence disabilities.

Fellows' performance on four program area assessments further supports their knowledge and skill as relates to working with students with high incidence disabilities. All fellows, i.e., 100%, achieved "target" performance on the following program area evaluation projects: (a) IEP lesson

Table 6
Special Education Directors' TCSEFP Evaluation Survey Data (N=8)^a

Questions	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Overall, the residence in teaching program (Teachers College Special Education Fellows Program, TCSEFP) is well organized	100%				
Tuition funding for the fellows is a key component of the residence in teaching program	75%	25%			
On-site mentoring for the fellows is a key component of the residence in teaching program	100%				
Virtual mentoring provided by professors/faculty for the fellows is a key component of the residence in teaching program	100%				
Fellows' completion of the high incidence endorsement in 11 months is a key component of the residence in teaching program	88%	12%			
Virtual university/school partnerships are a key component of the residence in teaching program	100%				
Virtual university consultation for low incidence disabilities (e.g., autism) is a key component of the residence in teaching program	100%				
The residence in teaching program helped me recruit new special education teachers	88%	12%			
The residence in teaching program helped me retain special education teachers	50%	25%	25%		
Overall, the residence in teaching program meets the need to provide highly qualified special education teachers for high needs regions in Kansas	100%				

^a2 Special Education Directors sponsored 5 fellows, 2 Special Education Directors sponsored 3 fellows, 2 Special Education Directors sponsored 2 fellows, and 2 Special Education Directors sponsored 1 fellow.

plan activity, (b) DI/UDL literacy lesson plan project, (c) FBA/BIP project, and (d) family and community engagement project. Consequently, fellows' performance on these evaluation projects attests to their abilities to plan, implement, and evaluate a variety of learning and social/behavioral activities to support the performance of students with high incidence disabilities in rural schools throughout Kansas. These activities demonstrated the fellows' abilities to plan effective, individualized instruction tied to IEP objectives. These lessons incorporated content standards to assure that all students with mild to moderate disabilities on their caseloads had access to and made progress on content area curriculum. Further, while some of these evaluation activities occurred in special education resource rooms, the majority occurred in inclusive general education classrooms thereby underscoring the fellows' abilities to collaborate with general education teachers.

Similarly, 100% of the fellows achieved "target" level performance on the Final Practicum Evaluation Rating Scale. Of importance, mentors and building principals completed this evaluation independent from university faculty. Thus, this evaluation corroborated university faculty evaluation of fellow performance on these activities: (a) IEP lesson plan activity, (b) DI/UDL literacy lesson plan project, (C) FBA/BIP project, and (d) family and community engagement project. In addition, on-site evaluators who work with and observe the fellows daily complete the Final Practicum Evaluation Rating Scale enhancing the validity of this evaluation.

Consequently, fellow performance on all evaluations, i.e., Praxis II, IEP Lesson Plan Activity, DI/UDL Literacy Lesson Plan Project, FBA/BIP Project, Family and Community Engagement Project, and Final Practicum Evaluation Rating Scale, strongly support our conclusion that the TCSEFP prepares highly qualified special educators to work with K-12 students with high incidence disabilities in rural schools throughout Kansas.

However, it's not all about preparing highly

qualified special education teachers. After completion of the TCSEFP, how do the fellows, their mentors, and administrators rate the TCSEFP? Overall, 21 of 22 (95%) fellows strongly agreed or agreed with each item on a 12-item program evaluation survey completed after finishing their residency. One fellow (5%) rated three items on the Fellow TCSEFP Evaluation Survey as neutral. Each of these items targeted teaching. One item provided feedback on how useful and relevant this fellow found course materials and activities. Another item provided feedback on how up to date this fellow considered university faculty. The final item provided feedback regarding the comments this fellow received from university faculty on course assignments. Interpretation of these responses is straightforward given the focus of each item. Of note, by the third year, i.e., 2018-2019, university faculty began providing training for mentors related to various field assignments, e.g., DI/UDL Literacy Lesson Plan Project. This training updated mentors on Universal Design for Learning (UDL) (Rao & Meo, 2016) and the research supporting its benefits. Mentors commented on how beneficial they found this training. They indicated that this was new information for them. Thus, it is possible that one fellow thought their mentor was current and university faculty were not when, in fact, the mentor was outdated, i.e., had not had training specific to UDL or other current topics. Similarly, 87% (14 of 16) mentors strongly agreed or agreed with each item on a 12-item program evaluation at the end of the residency year. Two of 16 mentors rated two items as neutral. Both items related to the mentor Canvas website. These mentors rated the navigability of the website as neutral. They also indicated that the website was not updated during the second semester of the residency year. As we worked with the mentors, we found that they had difficulty accessing the website, i.e., setting up their UserIDs and passwords. While we provided university technology support, this issue, unfortunately, remained problematic for some mentors from 2016-2020. Because so many mentors had trouble accessing the mentor

website, university faculty tended not to rely as heavily on the website during the second semester of the residency. Thus, the mentor website was only updated for spring semester during the first two years, i.e., spring semesters 2017 and 2018. In addition, 75% (6 of 8) special education directors strongly agreed or agreed with each item on a 10-item program evaluation survey completed at the end of the residency year. Two of 8 (25%) special education directors were neutral as to whether the TCSEFP helped them retain special education teachers. Follow-up conversations with the special education directors provided more understanding regarding this response. Some of the directors define retention as five years or longer whereas the others define retention as two years or longer. Thus, those who rated this survey item as neutral may not have had enough longevity data to determine whether the TCSEFP helped them retain special education teachers.

In conclusion, survey data from the fellows, their mentors, and their special education directors support their positive evaluation of the TCSEFP. This data together with fellow evaluation data strongly support the overall worth of the TCSEFP for fellows, their administrators, and their mentors.

In addition, this data captured the emergence of virtual university/K-12 school partnerships throughout rural Kansas, even in remote rural regions of the state. Through distance technologies, partnerships evolved. By 2018-2019, university faculty cheered as they saw improved K-12 student performance in partner schools. Meanwhile, mentors and building administrators often asked about how “doable” a practicum modification would be for the university. Our vocabularies changed. We spoke the same language and used the same acronyms. We understood funding constraints each partner experienced. Our K-12 partners celebrated university faculty constantly highlighting the strengths they saw. The university faculty gained a heightened respect for teachers and

administrators working to support the needs of students with high incidence disabilities in rural settings. Faculty no longer made disparaging comments about the many and varied unusual ways rural schools modified delivery service models to meet the needs of students with disabilities despite a paucity of resources. University faculty began to understand the unique challenges rural schools face providing special education services for students with disabilities. University faculty came to value the “can do” spirit and innovation of their colleagues working in rural schools. Meanwhile, our partners took full advantage of the ongoing access they had to university faculty and resources. They eagerly learned new evidence-based practices (EPBs). They sought outside expertise for students with complex learning needs. Transformation for both our partners and the university special education program began and continued throughout the partnership.

Conclusion

This article reports a self-study of the Teachers College Special Education Fellows Program (TCSEFP), an 11-month, virtual graduate special education program developed to prepare special education teachers to work in rural schools throughout Kansas. The self-study questions included: (a) Will participants in an accelerated, virtual special education teacher preparation program develop the requisite knowledge and skills to support the educational performance of K-12 students with high incidence disabilities? (b) Will an 11-month residency in teaching program lead to higher rates of special education teacher recruitment and retention in rural schools? and (c) How satisfied are participants after program completion?

The self-study data support the benefits of this virtual residency in teaching teacher preparation model. Participants demonstrated “target” level performance on program assessments evaluating the development of the knowledge and skills needed to support the learning and social development of students with high incidence

disabilities. Similarly, the data support that all participants found the virtual residency in teaching program to be beneficial. The virtual residency in teaching program enhance improved recruitment of special education teachers to work in K-12 rural schools. Eighteen of 22 special education teachers who participated in this residency in teaching program continue to teach special education; however, it is too early to evaluate the impact of this model on teacher retention. An unexpected strength of the virtual residency in teaching model is the quality of university/school partnerships it supports. Through virtual technologies geography is no longer a barrier to establishing university/school partnerships. Virtual technologies bring the university and its resources to rural schools located in remote, rural regions. In addition, virtual technologies provide ready access for all partners. No longer do partners need to wait 1=2 weeks to facilitate on-site meetings related to various partnership activities, e.g., resolving a challenging practicum supervision issue.

Author Note

The Kansas Board of Regents provided funding (\$452,661: 5-year grant, 2016-2021) in support of this program through the Kansas Teacher Education Competitive Grant Program of Kansas Board of Regents, Topeka, KS.



References

- Alan, B. (2016). Self-study as a qualitative methodology in teacher education. *Journal of Qualitative Research in Education, 4*(1), 7-25. <http://dx.doi.org/10.14689/issn.2148-2624.1.4c1s1m>
- Berry, A. B., Petrin, R. A., Gravelle, M. L., & Farmer, T. W. (2012). Issues in Special Education Teacher Recruitment, Retention, and Professional Development: Considerations in Supporting Rural Teachers. *Rural Special Education Quarterly, 30*(4), 3-11.
- Bisaha, S. (host). (2018, Oct 15). *Kansas' Worsening Teacher Shortage in Four Graphs* [Radio broadcast episode]. <https://www.kmuw.org/post/kansas-worsening-teacher-shortage-four-graphs>
- Bock, M.A. (2021). *The Teachers College Special Education Fellows Program (TCSEFP) 202-2021 Annual Report*. Emporia State University.
- Bock, M.A. (2020). *High incidence special education Kansas State Department of Education program area report*. Emporia State University.
- Bock, M. A., Caballero, M., & O'Neal-Hixson, K. (2020). The TCSEFP Hybrid eMentoring Model: A Distance Education Mentoring Model. *Educational Renaissance, 9*, 23-30.
- Bock, M.A. & O'Neal-Hixson. (March 2016). *The Teachers College Special Education Fellows Program (TCSEFP)*. [\$455,661: 5-year grant, 2016-2021] Kansas Teacher Education Competitive Grant Program of Kansas Board of Regents, Topeka, KS. Emporia State University.
- Buttner, A. (2021, August 4). Special education and the teacher shortage. *Frontline Education*. Retrieved October 12, 2021, from <https://www.frontlineeducation.com/blog/special-education-teacher-shortage/>
- Coffman, A. & Patterson, R. (2014). *Teacher residencies: Redefining preparation through partnerships*. National Education Association.
- Deines, A. (2017, Sept 13). Teacher Shortages Persist in Kansas, State Board of Education Members Learn. *The Hays Daily News*. <https://www.hdnews.net>
- Educational Testing Service. (2021, May 30). *Special Education: Core Knowledge and Mild to Moderate Applications* (0543/5543). <https://www.ets.org/praxis>
- Gonzalez, B. M. (2020, January 13). *Where are all the special educators*. Medium. Retrieved October 12, 2021, from <https://medium.com/age-of-awareness/where-are-all-the-special-educators-aaa9281c48b5>.
- Guha, R., Hyler, M. E., & Darling-Hammond, L. (2017a). The power and potential of teacher residencies. *Phi Delta Kappan, 98*(8), 31-37.
- Guha, R., Hyler, M. E., & Darling-Hammond, L. (2017b). The teacher residency: A practical path to recruitment and retention. *American Educator, 41*(1), 31-34.
- Hager, K. D., Baird, C. M., Spriggs, A. D. (2012). Remote teacher observation at the University of Kentucky. *Rural Special Education Quarterly, 31*, 3-8.
- Han, G., & Doyle, D. (2013). *Teachers-in-Residence: New Pathways into the Profession. Ask the Team*. Center on Great Teachers and Leaders. <https://eric.ed.gov/?id=ED555664>
- Lambert, D. (2020, January 10). Amid shortages, California schools settle for underprepared special education teachers. *EdSource*. Retrieved October 15, 2021, from <https://edsources.org/2020/amid-shortages-schools-settle-for-under-prepared-specialeducation-teachers/621656>.
- Rao, K. & Meo, G. (2016). Using Universal Design for Learning to Design Standards-Based Lessons. *SAGE Open, 6*(4), 1-12. doi:10.1177/2158244016680688
- Rural School and Community Trust. (2013, November 21). *It's complicated . . . Why what's rural matters*. <https://www.ruraledu.org/articles.php?id=3127>
- Sindelar, P. T., Pua, D. J., Fisher, T., Peyton, D. J.,

Brownell, M. T., & Mason-Williams, L. (2018). The Demand for Special Education Teachers in Rural Schools Revisited: An Update on Progress. *Rural Special Education Quarterly*, 37(1), 12–20.

Thorpe, R. (2014). Residency: Can It Transform Teaching the Way It Did Medicine? *Phi Delta Kappan*, 96(1), 36–40.

