

**Professional Development of Secondary Family and
Consumer Sciences Educators in the Northwest United States:
Demographics, Needs, Motivations, and Deterrents**

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The purpose of this study was to explore secondary family and consumer sciences (FCS) educators' perceptions of professional development (PD) opportunities pertinent to their area of content, focusing on needs, access, motivations, and deterrents. A modified version of the Borich (1980) Needs Assessment Model was used to collect data from 328 active secondary FCS educators in Idaho, Montana, Oregon, Washington, and Wyoming. Participants rated competencies for FCS educators on a four-point Likert scale for both importance and competence. Mean weighted discrepancy scores were calculated to rank the competencies by perceived need. Statements on needs, access, motivations, and deterrents were ranked on a four-point Likert scale for analysis. Participants identified establishing student internships or jobs, keeping current on FCS trends and issues, and developing a variety of school-to-work/career activities were their highest PD needs. Additionally, PD specifically related to specific content area had the highest motivation value for participants.

Keywords: family and consumer sciences, career and technical education, professional development needs

Introduction

Professional development (PD) is considered an important factor in fostering teaching improvements in educators (Bill & Melinda Gates Foundation, 2017; Kennedy, 2016). United States' school districts spend an average of \$18,000 per educator per year on PD, with educators dedicating approximately 19 full school days annually participating in PD (The New Teacher Project, 2015). Despite significant investment in both money and time, there is no documented growth in educator effectiveness or teaching skills as a result from PD (Zou et al., 2023). More than half of K-12 educators reported the PD they received as ineffective and a poor use of their time (Merrimack College, 2022; The New Teacher Project, 2015). This is problematic as a crucial element of teaching is developing relevant curriculum and course content. Relevant curriculum and content are especially important in Career and Technical Education (CTE) courses (Cannon et al., 2013). Due to the unique nature of CTE programs, CTE teachers have additional unique training needs related to overall program management. Besides the responsibilities of designing engaging activities, which facilitate learning, CTE teachers prepare

and manage program budgets, supervise and advise career and technical student organizations, create effective public relations, maintain industry advisory committees, and complete academic and state reports. (Cannon et al., 2013, pp. 39-40)

Without effective PD, CTE educators lack the training required to prepare their students to enter a competitive and rapidly evolving job market. To overcome this barrier, needs assessments must be conducted to identify PD opportunities that educators perceive as important, and consider ways to increase accessibility.

Literature Review

FCS Trends and Issues

Family and consumer sciences (FCS) is a complex field within CTE that focuses on a vast array of applicable vocational and life skills. Historically, it was taught through the technical “how to” approach. However, in 1993, the discipline was reevaluated (Erwin, 2018). These changes began with a name change of home economics to FCS and followed by curricular updates (Erwin, 2018). In 2006, the Carl D. Perkins Career and Technical Education Improvement Act required FCS educators to create “coherent and rigorous content aligned with challenging academic standards as are taught to all other students” (Duncan, 2011, p. 9). To do so, areas of study – also known as clusters or pathways – were created to prepare students for success in their post-secondary academic and workplace experiences (Advance CTE, 2023; Idaho Division of Career Technical Education, 2023; Carl D. Perkins Career and Technical Education Improvement Act, 2006). The reauthorization of the Perkins Act in 2018 continued the support of pathways to assist students’ transitions from secondary to post-secondary academic and work opportunities (Strengthening Career and Technical Education for the 21st Century Act, 2018). Pathways focused on providing students work-based experiences to achieve this success in college and career (Advance CTE, 2023).

To facilitate work-based experiences, FCS educators should possess a strong, practical background of their course content (Cannon et al., 2013; Erwin, 2018; Ward & Lee, 2005). An educator’s knowledge of skill application can help design environments where students can learn workplace-applicable skills. Therefore, FCS educators should specialize in the areas they teach to better equip students with workplace-applicable skills (King & Wang, 2009). To stay current with industry trends and requirements, FCS educators need access to relevant, effective, content-specific PD (Bill & Melinda Gates Foundation, 2017; Cannon et al., 2013; Erwin, 2018). Lack of content-specific PD may be a barrier for FCS educators. Active participation in content-specific PD is necessary for educators to stay informed of occupational trends to prepare students to successfully enter competitive academic and workplace environments (Arnett, 2012; Arnett-Hartwick, 2020; Erwin, 2018).

Both Perkins IV and V emphasized career-readiness (Carl D. Perkins Career and Technical Education Improvement Act, 2006; Strengthening Career and Technical Education for the 21st Century Act, 2018). Previously, No Child Left Behind (2002) and Every Student Succeeds Act (2015) outlined provisions that allowed educators more input in the PD they were offered (Drage, 2010; National Education Association, 2020). For FCS educators to adhere to these acts in their curriculum, instruction, and assessment, they must receive adequate support: specifically in the form of relevant, effective, content-specific PD opportunities from their administrators and districts (Arnett, 2012; Arnett-Hartwick, 2020; Bill & Melinda Gates Foundation, 2017; Cannon et al., 2013).

Curriculum Design and Assessment Methods

Curriculum design and assessment methods should align with up-to-date national and state standards, as well as focus on students' development of career-readiness skills (Dahlback et al., 2020; Imperatore, 2019).

The curriculum should guide the learner, the teacher, and educational managers. At the same time, it should leave room in its implementation for the creative and individual professionalism of the teacher, and for the individual preferences of the learner, given that both are clear about what is to be achieved. ...the curriculum is the basis for planning and developing the assessment system. If there is no agreed curriculum, how can we develop an objective, representative, valid and reliable assessment system? Simply, we cannot. (Grant, 2018, p. 72)

Research has shown that the use of authentic assessment in CTE can appropriately assess students' career-readiness (Connolly et al., 2023; Dahlback et al., 2020; Thurab-Nkhosi et al., 2018). Authentic assessment is supported by constructivist theorists who endorse that bringing the real-world context into the classroom can promote learning (Ashford-Rowe et al., 2014). Constructivist learning theory suggests that competence is "perceived not in terms of skill mastery, but as situation and personal, and an emphasis is placed on the need for close alignment of assessment with diverse and rich contexts of performance in the real world" (Ashford-Rowe et al., 2014, p. 206). In teaching environments where authentic assessment is used, students can gain greater confidence in the content and their skills in the specific area; students can improve overall performance, learning transfer, and mastering competencies (Connolly et al., 2023; Thurab-Nkhosi et al., 2018).

Developing, implementing, and revising curriculum and authentic assessment is a task that requires training, experience, and support, which can be provided to a diverse population of FCS educators through appropriate PD opportunities. A lack of appropriate PD opportunities may contribute to declining FCS educator retention (Bowers, 2022; Hasselquist & Graves, 2020).

Routes to FCS

A growing shortage of secondary FCS educators has been reported across the U.S. (Arnett-Hartwick, 2017; Bowers, 2022; Erwin, 2018; Werhan, 2013; Werhan & Way, 2006). This trend indicates a continuing need for secondary FCS educators in the future. Traditionally, FCS educators have held a bachelor's degree in education and FCS before entering the classroom. But, due to the decrease in educators following the traditional route, closures of many FCS educator preparation programs, and the increase of interest in those switching from a technical career to teaching FCS, alternative routes to certification have been created (Bowers, 2022; Bowers & Myers, 2019; Duncan et al., 2017; National Institute of Food and Agriculture, 2023; O'Connor, 2012). Educators who choose an alternative route may have experienced little to no educator training and therefore may need different types of PD compared to traditionally prepared FCS educators.

Professional Development

The role of a secondary FCS educator is time-consuming and demanding. Challenges include time management, facilities and equipment, budgets and funding, curriculum

development, student motivation, school policies, mentorship, lack of administrative support, insufficient preparation time due to high teaching loads, and relationships with colleagues (Arnett-Hartwick, 2020). FCS educators are expected to prepare and deliver course content, as well as assist their students in developing “the social, emotional and character maturity to be able to act responsibly and productively to synthesize knowledge from multiple sources, to work cooperatively, and to apply the highest standards in all aspects of their lives” (National Association of State Administrators of Family and Consumer Sciences, 2018). Furthermore, secondary FCS educators often teach three or more preps a day and are in single-person departments (Erwin, 2018).

PD in education often focuses on educators learning new practices and information related to their field (Kennedy, 2016). However, not all forms of PD, even those with the greatest evidence of positive impact, are of themselves relevant to all educators. Kitchel et al. (2010) noted that the “identification of priority areas is an important, but preliminary step in preparing and maintaining quality teachers” (p. 57). Therefore, there is a constant need to study, assess, discuss, and reflect on educator PD opportunities (Kennedy, 2016). By listening to educators when planning PD opportunities, PD could be tailored to better fit and support educators’ pedagogical practices (Cannon et al., 2013).

Method

The purpose of this study was to explore secondary FCS educators’ perceptions of PD opportunities pertinent to their area of content, focusing on needs, access, motivations, and deterrents.

Research Questions

The following research questions were explored in this research:

1. What were the characteristics of the FCS educators who participated in this study?
2. What were the perceived PD needs for the FCS educators who participated in this study?
3. What motivated the FCS educators who participated in this study to attend PD?

Participant Population

The participants were secondary FCS educators in Idaho, Montana, Oregon, Washington, and Wyoming in the 2019-2020, pre-COVID, school year. There were an estimated 875 secondary FCS educators within these five states. Of that, there were 328 respondents who completed 50% or more of the survey, which estimated a 37.49% response rate.

Survey Instrument

The survey instrument was created using Borich’s (1980) Needs Assessment Model and instruments developed by Kitchel et al. (2010) and Erwin (2018). During the development of the survey instrument, a pilot survey was distributed to 10 secondary FCS educators attending a PD workshop at the University of Idaho to review the instrument for logical validity and clarity. Ten alterations were subsequently made to the survey before it was distributed.

Instrument Implementation

In Fall 2019, the survey was emailed to potential participants. Due to various organizational structures across the five states, email invitations were sent through each state’s

recommended method of contact. These included state-wide FCS listservs and email distributions on a district-by-district level. Each state's FCS contact reported forwarding the survey invitation four times to active secondary FCS educators in their respective states. Additionally, as the research was conducted through the University of Idaho, flyers with survey invitations were distributed at the 2019 Idaho REACH Conference in Boise, Idaho.

Delimitations of this study included online distribution to only secondary FCS educators in Idaho, Montana, Oregon, Washington, and Wyoming. The survey did not require respondents to answer each question, resulting in many incomplete survey responses. Surveys with a completion rate of 50% or higher were included in the data analysis. The responses to the Likert scale questions were self-appointed and therefore allowed the potential of personal bias. The survey was anonymous; there was no implementation of strategy to ensure the survey was only taken once by each participant. Therefore, the possibility exists that one or more participants began or completed the survey more than once.

Data Analysis

Excel and SPSS were used to analyze the collected data. Questions with Likert scales were analyzed for frequencies, means, and standard deviations. Mean weighted discrepancy scores (MWDS) were used to rank each of the four educational component sections:

1. technology
2. course, curriculum, and standards development
3. teaching
4. PD, programs, and organizations

Independent samples *t*-tests were conducted to determine if there were any statistically significant differences at a $p < .05$ level between the 12 educational competencies in the survey and the participants' demographics. Data from the *t*-tests was analyzed to compare needs within the survey's participant population, identifying possible correlations between the independent variables of participant demographics and participant PD needs.

Results

As described by participants, FCS educators in the northwest United States were predominantly white ($N = 277$) and female ($N = 284$), with 46% over the age of 50. Most reported holding a master's degree and were prepared to teach through a traditional teacher education program. Nearly 50% of participants taught in a town of 2,500-50,000 people, 32% in a town of over 50,000, and 20% in a town of less than 2,500. Few participants reported teaching FCS for one year or less ($N = 23$). Most participants ($N = 123$) taught FCS for 2-10 years or 11-20 years ($N = 93$). Many participants reported teaching multiple areas of study either currently or in the past. The top three identified areas taught were Nutrition and Wellness ($N = 234$), Food Production and Services ($N = 210$), and Education and Early Childhood Development ($N = 203$) (see Table 1).

Most participants ($N = 289$) reported preparing for their role as an FCS educator through an undergraduate teacher education program. Other routes to teaching included substitute teaching that resulted in a permanent position ($N = 18$), alternative routes such as Peace Corps or Teach for America ($N = 13$), and a limited or standard occupational specialist certification ($N = 12$). While the highest levels of education varied, less than 2% reported having less than a

Table 1
FCS Areas of Study Taught Currently or Previously

FCS Area of Study	N (%)
Career, community, and family connections	142 (43.29)
Consumer and family resources	124 (37.80)
Consumer services	62 (18.90)
Education and early childhood development	203 (61.83)
Facilities and property management	5 (1.52)
Family	131 (39.94)
Family and human services	94 (28.66)
Food production and services	210 (64.02)
Food science, dietetics, and nutrition	163 (49.70)
Hospitality, tourism, and recreation	83 (25.30)
Housing and interior design	154 (46.95)
Human development	179 (54.57)
Interpersonal development	143 (43.60)
Nutrition and wellness	234 (71.34)
Parenting	169 (51.52)
Textiles, fashion, and apparel	177 (53.96)
Unsure of area(s) of study taught	10 (3.05)
No answer	1 (0.30)

Notes. All variables are presented as counts with column percentages in parentheses. Participants could pick as many areas of study as they have taught; the total percentage will be more than 100%.

bachelor’s degree and less than 1% more than a master’s. Most participants reported having a master’s degree plus graduate hours ($N = 112$). While 42% of participants met with other FCS educators to collaborate at least once a month, 53% responded that they were the only FCS educator in their school.

Perceived Professional Development Needs
Years Participants Taught FCS

Statistically significant differences in MWDS were identified based on years the participant had taught FCS. Those who had taught 14 years or less reported needing more PD opportunities in:

- determining the content that should be taught in their specific courses (14 years or less, $M = 1.42$; 15 years or more, $M = 0.03$);
- keeping current on trends and issues in their area of content (14 years or less, $M = 2.10$; 15 years or more, $M = 1.18$);
- reporting their program information to their district and state Department of Education (14 years or less, $M = 0.82$; 15 years or more, $M = -0.54$);
- selecting current/relevant student references, materials, and textbooks (14 years or

- less, $M = 1.06$; 15 years or more, $M = 0.40$);
- educating students and maintaining required health and safety standards (state/federal/OSHA) (14 years or less, $M = 1.60$; 15 years or more, $M = 0.68$);
- organizing activities for students with local organizations relating to your content area (14 years or less, $M = 0.91$; 15 years or more, $M = 0.21$);
- providing information to students related to furthering their education in your content area (14 years or less, $M = 1.54$; 15 years or more, $M = 0.73$);
- establishing opportunities or creating connections for student work internships or jobs (14 years or less, $M = 2.39$; 15 years or more, $M = 1.11$); and,
- developing a variety of school-to-work activities in your curriculum (14 years or less, $M = 2.10$; 15 years or more, $M = 1.04$).

Highest Level of Education

Statistically significant differences in MWDS were identified based on participants' highest level of education. Those who had less than a master's degree reported needing more professional development opportunities in:

- using current and relevant non-computer technology to teach interactive lessons on content or career-specific tasks (such as up-to-date kitchen equipment, up-to-date sewing/design equipment, etc.) (less than a master's, $M = 1.26$; master's or above, $M = 0.52$);
- keeping current on trends and issues in your area of content (less than a master's, $M = 2.04$; master's or above, $M = 1.41$);
- reporting your program information to your district and state Department of Education (less than a master's, $M = 0.74$; master's or above, $M = -0.23$);
- selecting current/relevant student references, materials, and textbooks (less than a master's, $M = 1.24$; master's or above, $M = 0.34$); and,
- developing a variety of school-to-work activities in your curriculum (less than a master's, $M = 2.02$; master's or above, $M = 1.29$).

Level of Collaboration

Statistically significant differences in MWDS were identified based on participants' level of collaboration. Those who met for collaboration at least once a week reported needing more PD opportunities in:

- organizing activities for students with local organizations relating to your content area (met at least once a week, $M = 1.21$; met less than once a week, $M = 0.36$);
- developing a variety of school-to-work activities in your curriculum (met at least once a week, $M = 2.12$; met less than once a week, $M = 1.40$); and,
- integrating life skills into your curriculum (met at least once a week, $M = 0.99$; met less than once a week, $M = 0.50$).

Professional Organization Membership

Statistically significant differences in MWDS were identified based on participants' professional organization membership. Those who did not have membership in a professional organization reported needing more PD opportunities in:

- determining the content that should be taught in your specific course(s) (no membership in a professional organization, $M = 1.48$; membership in a professional

organization, $M = 0.61$).

Statistically significant differences in MWDS were identified based on participants' FCCLA adviser status. Those who were an FCCLA adviser reported needing more PD opportunities in:

- reporting your program information to your district and state Department of Education (FCCLA adviser, $M = 0.59$; non-FCCLA adviser, $M = -0.28$).

Those who were not an FCCLA adviser reported needing more PD opportunities in:

- organizing activities for students with local organizations relating to your content area (non-FCCLA adviser, $M = 0.89$; FCCLA adviser, $M = 0.19$).

Age

Statistically significant differences in MWDS were identified based on participants' age.

Those who were aged 40+ reported needing more PD opportunities in:

- using current and relevant computer/internet technology to teach interactive lessons on content or career-specific tasks (aged >40, $M = 1.15$; aged <40, $M = 0.20$).

Those who were aged 18-39 reported needing more PD opportunities in:

- determining the content that should be taught in your specific course(s) (aged <40, $M = 1.36$; aged >40, $M = 0.67$);
- keeping current on trends and issues in your area of content (aged <40, $M = 2.31$; aged >40, $M = 1.47$);
- reporting your program information to your district and state department of education (aged <40, $M = 1.05$; aged >40, $M = -0.12$);
- educating students and maintaining required health and safety standards (state/federal/OSHA) (aged <40, $M = 1.88$; aged >40, $M = 0.86$); and,
- organizing activities for students with local organizations relating to your content area (aged <40, $M = 1.18$; aged >40, $M = 0.23$).

While there are many notable PD needs, another factor that must be considered are educators' motivations and deterrents to participating in available PD opportunities.

Motivations and Deterrents to PD Participation

Participants were asked to rank four statements related to PD motivations and deterrents on a four-point Likert scale ranked from *Strongly Deters* to *Strongly Motivates* (see Table 2). Participants did not rank any of the options provided as a deterrent.

Table 2
Professional Development Motivations

Motivations	N	Mean	SD
The professional development is specifically related to your content area	290	3.76	0.517
The professional development is related to updated or new technology	292	3.39	0.657
The professional development will allow you to gain college credit	288	3.29	0.717
The professional development is offered at different times or in multiple sessions to allow for flexibility in scheduling	290	3.55	0.649

Discussion

The highest ranked PD need identified by participants was learning how to establish opportunities for student work internships/jobs. Research has indicated that participation in secondary CTE programs can help students attain better educational and occupational outcomes after graduation (Cho-Baker et al., 2021). Work-based learning provides CTE students with career exploration opportunities in the classroom. If FCS educators are unsure of how to implement work-based learning in the classroom, students may be missing a crucial element for success in CTE (Stone III, 2017).

Participants who taught for 15 years or less reported needing more PD opportunities related to pedagogy and curriculum development. This may indicate that there were not accessible PD opportunities offered on these topics for FCS educators, resulting in them learning through trial and error in their own classrooms while actively teaching. Participants who had less than a master’s degree reported needing more PD opportunities in areas typically taught more in graduate-level teacher education programs than undergraduate-level. Thus, FCS educators who complete a master’s degree may have a more developed understanding of these concepts.

Participants who were not members of a professional organization reported needing more PD opportunities in determining the content that should be taught in their specific courses. Professional organizations such as the American Association of Family and Consumer Sciences (AAFCS) or the Association for Career and Technical Education (ACTE) offer many benefits for members, including content-specific PD opportunities, often in the form of virtual PD, webinars, and conferences, which may be more accessible to busy professionals (AAFCS, 2023; ACTE, 2023). Research has indicated barriers to teachers joining professional organizations may include the cost of membership, the option of multiple applicable professional organizations to join, time limitations to participate in a professional organization, a lack of easily accessible resources or events through a professional organization, and age barriers in the marketing professional organization membership (Ford & Lambert, 2023).

Participants who were FCCLA advisers reported needing more PD opportunities in reporting program information to their district and Department of Education. FCCLA advisers are expected to lead their chapters in events and conferences (FCCLA, 2019). Due to this, FCCLA advisers may need to have a more in-depth understanding of reporting program

information than non-advisers.

Participants who were not FCCLA advisers reported needing more PD opportunities in organizing activities for students with local organizations relating to their content area. This demographic may not be expected to build relationships in their community. Due to this, additional PD may be necessary to build these relationships. Alternatively, or additionally, mentorship relationships between non-FCCLA and FCCLA advisers could be explored.

Participants who were aged 40+ reported needing more PD opportunities in using current and relevant computer/internet technology relating to content in their courses. Many educators over the age of 40 attended school before computer/internet technology was heavily incorporated into their curriculum. Due to this, these educators may have less education and practice in the use of current and relevant technology for their courses. As technology is a rapidly evolving field, staying up-to-date as an educator can be challenging, especially if one does not have a strong background in technology. Regular and content-specific PD opportunities relating to technology incorporation in the classroom may be an option to bridge this gap in knowledge and practice.

Participants who were aged 18-39 reported needing more PD opportunities in:

1. determining the content that should be taught in their specific course(s);
2. reporting program information to their district and Department of Education;
3. educating students and maintaining required health and safety standards health and safety; and
4. organizing activities for students with local organizations relating to their content area.

These four areas may be challenging for new educators as they often require classroom experience and community networking. A PD opportunity could be a mentor program, where less experienced FCS educators are paired with more experienced FCS educators. Building intergenerational relationships in the workplace can result in the passing of knowledge in both directions, such as curriculum development strategies, insight into new technologies, and increased networking connections (McCaughtry et al., 2005). Additionally, building strong support systems for educators can positively impact educator retention rates (Tybjerg-Jeppesen et al., 2023). Arranging meetings to collaborate outside of one's school can be more time consuming and therefore less accessible for many educators though (Murphrey, 2011). This should be considered when designing networking and support opportunities.

The strongest PD motivator reported by participants was that the PD was specifically related to their content area. FCS courses are focused on work-based learning, which differs from general education courses. Regular, content-specific PD opportunities are critical for FCS educators to successfully prepare students to enter competitive academic and professional careers post-graduation.

Conclusions

Overall, participants identified their top need for PD as learning how to establish opportunities for student work internships/jobs. Participants reported different needs based on their professional demographics. Participants who had been teaching less than 15 years responded that they needed more PD relating to pedagogy and curriculum development. Participants with less than a master's degree reported needing more PD relating to practices taught within a master's program, such as the use of current and relevant non-computer technology and developing robust curriculum.

Participants without a membership in a professional organization reported needing more PD in determining course content. Participants who were FCCLA advisers reported needing more PD related to reporting out program information. Those who were not FCCLA advisers reported needing more PD related to organizing content-specific activities with their students with local organizations. Participants over the age of 40 reported needing more PD to learn up-to-date computer/internet technologies related to their courses. While those under the age of 40 reported needing PD related to curriculum development and community networking. The strongest PD motivator reported by participants was that the PD was specifically related to their content area.

Recommendations and Relevance

As shown in this study, there is need for content-specific PD opportunities for secondary FCS educators in the Northwest (NW) United States. As there are 16 areas of study taught in FCS, each district should evaluate their FCS programs by assessing individual educator's PD needs. Administrators could use this study as a guide for assessing those needs. Administrators could analyze the data collected to provide the PD opportunities identified by their educators. Administrators are encouraged to conduct these assessments regularly to stay up to date on their educators' needs. The 37% response rate to this survey indicated that FCS educators in the northwest United States have strong opinions about their PD opportunities. FCS educators can use the data in this study to address PD needs with their administration and work to advocate for the types of PD opportunities they need to be successful.

In writing this manuscript, we questioned the relevance of pre-COVID data: *Would this data still represent the needs of FCS educators today?* While the landscape of education is always evolving, notably quite rapidly with the transition to online/hybrid courses during COVID, the PD needs reported in this research likely remain and are potentially amplified. Future studies should continue to be conducted to explore the ever-changing needs of FCS educators.

Future Studies

The following research questions were based on discussions that arose through the process of reading, analyzing, and discussing the data collected in this study. These questions did not fit into the spectrum of this study but could provide important information in future studies:

- How does diversity play a role in teaching secondary FCS in Idaho, given the homogenous educator population?
- How do preferred ways of PD affect educators' willingness to participate in PD?
- What are the impacts of intergenerational educator mentoring?
- What are the impacts of collaborative experiences between secondary and post-secondary educators?
- How does school culture impact PD?
- How did COVID19 change the PD needed by FCS/CTE educators?

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