



Growing CTE through Innovative Research and Professional Development

December 3-4, 2019
Anaheim, California

**Research and Professional
Development Conference**

ACTER   

ACTER Association for Career and Technical Education Research

<http://www.acteronline.org>

A national membership association that aims to stimulate research and development in CTE, to stimulate training and education programs designed to prepare people for responsibilities in CTE research, to foster cooperative CTE research and development activities, and to facilitate the dissemination of research findings and diffusion of knowledge.

2019 Leadership:

President Cynthia Pellock, Penn State University
President-Elect Jack Elliot, Texas A&M University
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Ambassador-at-Large Mary Jo Self, Oklahoma State University
Conference Program Chair Xue Xing, University of Nevada, Las Vegas
Webmaster Leane Skinner, Auburn University

Publishes *Career and Technical Education Research (CTER)*,
<http://www.ingentaconnect.com/content/acter/cter/>

Editor: Michelle E. Bartlett, North Carolina State University
Associate Editor: In Heok Lee, University of Georgia
Managing Editor: Matthew Spindler, Green Bay, WI
Editorial Board Chair, Katherine Kandelac Holm, Athens State University

Lead organization responsible for coordinating the work of the Planning Committee for the CTE Research and Professional Development Conference.



Omicron Tau Theta

<http://www.ottonline.org>

A national, honorary, professional graduate society in CTE, established to acknowledge the achievement of graduate students, professional educators, and leaders of business, industry, and government in CTE.

2019 Leadership:

Advisor Elaine Adams, University of Georgia
Secretary Sally Arnett-Hartwick, Illinois State University
Past President Kristin Stair, Louisiana State University

Publishes the *Journal of Career and Technical Education (JCTE)*,
<https://journalcte.org/>

Editors Edward Fletcher and Victor Hernandez, University of South Florida
Editorial Board Chair, Barbara Hagler, Southern Illinois University-Carbondale



<http://www.theuniversitycouncil.org>

An organization of universities with doctoral programs in Career and Technical Education (CTE) and/or Human Resource Development (HRD) aiming to provide leadership for teaching, research, service, and policy initiatives in the field of practice shared by CTE & HRD.

2018-2019 Leadership:

President: John Cannon, University of Idaho
Past-President: Alexandre Ardichvili, University of Minnesota
President-Elect: Mary Jo Self, Oklahoma State University
Secretary: Elaine Adams, The University of Georgia
Treasurer: Chris Zirkle, The Ohio State University
Trustee (2017-2020 term): Khalil Dirani, Texas A&M University
Trustee (2018-2021 term): Urs Haltinner, University of Wisconsin-Stout
Trustee (2019-2022 term): Keith Waugh, Valdosta State University



The ACADEMY for Career and Technical

A national professional association established to create a unified voice for teacher educators of all CTE program areas.

The Academy has responsible for leading the symposia at this conference since 2006.

In 2016, the executive committee voted to dissolve the association, but committed to supporting this conference with an annual financial contribution and coordination of symposia.

2019 Leadership:

Elaine Adams, University of Georgia

ACTE's CareerTech

VISION

<http://www.acteonline.org>

The CTE Research and Professional Development Conference is a companion event of ACTE's annual CareerTech VISION and Expo, the premier gathering of more than 4,000 CTE professionals. ACTE (Association for Career and Technical Education) is a membership organization aspiring to empower educators to deliver high quality CTE programs that ensure all students are positioned for career success.

Members align with one or more "divisions" related to program area and/or professional role. The New and Related Services Division includes 16 sections representing specializations that cross multiple career clusters. Research, Teacher Education, and Professional Development are 3 of the 16 NRS sections, and the Research section is headed by the ACTER Ambassador-at-Large. The Research, Teacher Education, and Professional Development sections will combine this year to form one NRS section, CTE Scholars, uniting ACTE members who study and teach CTE content in higher education settings.



December 3-4, 2019
Anaheim, California

Growing CTE through Innovative Research and Professional Development

TUESDAY, DECEMBER 3, 2019

Conference Registration

10:00 a.m.-5:00 p.m., ACTE Registration, 4th Floor Hilton

Committee Meetings

10:00-Noon, Palos Verde B

ACTER Executive & Conference Planning Committees

Noon-1:00 p.m., Palos Verde A

CTER Editorial Board meeting

1:00-2:00 p.m., Palos Verde B

JCTE Editorial Board & OTT Executive Committee

IES Workshop, Welcome, and Networking Sessions

2:00-5:00 p.m., Palos Verde A

IES Grant Writing Workshop, Corinne Alfeld, Program Officer, CTE Research, IES USDE (by invitation only).

5:00-7:00 p.m., El Capitan A & B

Welcome Reception and CTE Research Network

Presentation, Shaun Dougherty, Associate Professor, Vanderbilt University (open to all).

7:00-7:30 p.m., Palos Verde A

First Timers Welcome and Orientation *Are you new to the CTE Research and Professional Development Conference? Stop by this session to meet other newcomers, get comfortable, and learn about the conference partner organizations.*

7:30-8:30 p.m., Palos Verde B

Fireside Chat for Graduate Students and Early Career

Professionals *The University Council for Workforce and Human Resource Education professors will offer career advice to graduate students and newly graduated professionals. Come meet new mentors and get excited about your future. End your day with relaxing conversation with conference colleagues but, remember the opening session and breakfast tomorrow is at 7:45 a.m.*

WEDNESDAY, DECEMBER 4, 2019

Conference Registration

7:00 a.m.-1:30 p.m., ACTE Registration, 4th Floor Hilton

Opening Session

7:45-9:10 a.m., Laguna A & B

Welcome Jack Elliot, Conference Chair

Greetings from the Conference Partners

Cynthia Pellock, President, Association for Career and Technical Education Research (ACTER)

Elaine Adams, National Advisor, Omicron Tau Theta (OTT); Representative, The Academy for Career Tech Teacher Education (The Academy)

John Cannon, President, University Council for Workforce and Human Resource Education (University Council, UCWHRE)

Austin Estes, Senior Policy Associate, Advance CTE

Breakfast

Keynote Address: The State of the State of CTE

Deputy Assistant Secretary Casey K. Sacks for Community Colleges, Office of Career, Technical, and Adult Education, U.S. Department of Education

Research Paper Presentations on New CTE Teacher Readiness

9:15-10:45 a.m., Malibu, Floor 4

Discussant: Mary Jo Self, Oklahoma State University

Chair: Linda Martinez, California State University Long Beach

Delphi Study Identifying Future Technical Competencies for Architecture and Construction Educators

Jon Jones, Pittsburg State University

Greg Belcher, Pittsburg State University

Julie Dainty, Pittsburg State University

The purpose of this modified Delphi study was to identify the dominant technical competencies needed to effectively teach architecture and construction at the secondary and post-secondary level and to determine if there are differences of opinion among educators, recent graduates and industry personnel as to what those competencies should be. To provide instructors with the knowledge and skills that align with industry needs, it was imperative to identify the changing technical competencies needed by the workforce and the instructors who prepare them. A three round Delphi study was conducted to identify the dominant technical competencies. From a list of 23 technical competencies, seven technical competencies emerged as the highest rated in perceived level of importance by the three groups.

An Exploration of Career and Technical Teacher Preparation

Mark D. Threton, Pennsylvania State University
John C. Ewing, Pennsylvania State University
Laura Rice, University of Kentucky
Kyungin Kim, Pennsylvania State University

Educator preparation programs have a responsibility to successfully prepare program completers for their teaching positions. However, with limited studies in CTE which explore program completers' level of preparedness, it is difficult to determine if teacher candidates are developing the knowledge, skills and dispositions needed to be effective educators. Therefore, Pennsylvania State University explored program completers in six domains including; 1) Designing Curriculum and Instruction to Promote Learning, 2) Supporting Diverse Learners, 3) Using Assessment to Guide Learning and Teaching, 4) Creating a Productive Classroom Environment/Teach Critical Thinking, 5) Professional Development, and 6) Use of Technology. The results indicated opportunities for program improvement. The findings may be useful to teacher educators as well as educator preparation programs within the U.S.

Characteristics of High-Quality Career and Technical Education Teachers

Cynthia Williams, University of Idaho
John Cannon, University of Idaho
Daniel Campbell, University of Idaho

The purpose of the study was to explore and inventory the characteristics of State's high-quality CTE teachers without using student learning outcomes as a measure of quality. The survey was distributed to 771 postsecondary teachers in the state of [state] with a response rate of 44.8%. Significant results from the study indicated State's CTE teachers have strong self-efficacy, a growth mindset, and believe that having a mentor was related to their success as a teacher. The inventory of teacher characteristics formed the CTE-CTI Framework: Characteristics of a high-quality CTE teacher depicting education and experience, professional development, beliefs, great teacher attitudes, and related practice components. This study is considered to be generalizable.

Research Paper Presentations on CTE Assessment

9:15-10:45 a.m., Oceanside, Floor 4
Discussant: Shaun Dougherty, Vanderbilt University
Chair: Melanie Bloom, University of Missouri

The Effect of Multiple-Choice Item Length on the Difficulty Outcomes of a Career and Technical Education Assessment

Tina Koepf, NOCTI

Critical decisions in Career and Technical Education (CTE) are often based on assessment outcomes, requiring an essential focus on assessment validity. This quantitative study examines relationships between multiple choice (MC) item difficulty and MC item length for a national CTE employability assessment, encompassing approximately 3,500 CTE student test-takers. Hierarchical Linear Modeling (HLM) analyzes the significance between the assessment outcome difficulty variables with the predictor variables (stem length, response option length, Bloom's taxonomy level, readability level, and student demographics) for the total and lower-scoring groups of CTE students. Best practices suggest that MC item writers develop concise items by avoiding extraneous wording. This research serves as a case study in assessment analysis in the context of CTE and reinforces best practices.

Assessing 21st Century Skills: Validation of a Self-Efficacy Instrument

Brooke L. Thiel, North Dakota State University
Adam A. Marx, North Dakota State University

There is a growing need for the development and assessment of 21st century skills across secondary education. This study sought to develop a comprehensive instrument using Bandura's Social Cognitive Theory and P21 Framework Definitions for 21st Century Skills. Initial internal reliability was established using a test-retest procedure with high school students. The final instrument was administered to a selected group of high school students (n=287). Using an identified reliability stability threshold of .70, a final instrument of 87 questions was developed to measure the perceived self-efficacy of eleven 21st century skill constructs.

Rethinking Career and Technical Education in an Era of College and Career Readiness

Walter G. Ecton, Vanderbilt University

Taking advantage of a nationally-representative dataset that follows students who were high school freshmen in the fall of 2009, this study provides an in-depth look at patterns of CTE course-taking in America in the era of College and Career Readiness and Career Pathways. We provide an updated descriptive portrait at which students are taking more CTE courses, identify student and school characteristics that predict CTE concentration status through logistic regression analyses, and use propensity score matching techniques to explore potential causal effects of CTE concentration.

Research Paper Presentations on CTE Industry Needs

9:15-10:45 a.m., San Clemente, Floor 4
Discussant: Katherine Caves, ETH Zurich
Chair: Jodi Adams, University of Louisville

Building Cooperation Capacity in Trade and Engineering Technicians

Matt Spindler, Northeast Wisconsin Technical College

The catalytic nature of effective cooperative teamwork is no accident, but how do we help future trade and engineering technicians develop their ability to work well in teams? Research demonstrates that cooperative learning strategies provide an effective means for improving students' understandings of technical concepts and techniques. However, to date, research has not yet examined how instructors might improve the outcomes of cooperative teams by organizing them to capitalize on the cognitive diversity each student brings into the learning context. The findings support Kirton's adaption-innovation theory and reveal that student teams which had higher levels of cognitive diversity were more successful in a dynamic problem-solving simulation activity and had a more favorable outlooks regarding the benefits of cooperation.

A Cooperative Learning Team Approach to Motivating AET Instructor Pedagogical Training

Matt Spindler, Northeast Wisconsin Technical College

Instructors working within AET systems must be able to facilitate student learning and work with a range of colleagues to create positive learning contexts. However, it is likely improvements in AET systems and the agricultural sector in developing nations will continue to be stifled if effective instructor training process are not constructed and actuated. The purpose of this descriptive study was to create information about the employment of cooperative learning as a content and process component of AET instructor professional development training in Nigeria. The findings illustrate that AET instructor participants perceived that Cooperative Learning Team processes helped them improve their pedagogical skills, increase their motivation to improve their teaching, and develop their ability to work effectively with their colleagues.

An Industry Assessment of Employability Skills Needed in Concentrated Animal Feeding Operations of the Swine, Dairy, and Fed-Beef Industries

Nathan Wolf, West Texas A&M University
Kevin Williams, West Texas A&M University
Lance Kieth, West Texas A&M University
Tanner Robertson, West Texas A&M University
Mallory Vestal, West Texas A&M University
Angela Burkham, Texas A&M AgriLife Extension Service

The purpose of this study was to identify desired employability skills needed by entry-level employees entering a profession in concentrated animal feeding operations (CAFO's) within the swine, dairy, and fed-beef industries. The study's population consisted of CAFO employers within a designated geographical region. Thirty-one skills were observed that examined the level of employee preparedness and the level of importance of those skills. Data were collected through an online survey. Participants valued honesty/integrity and dependability/dedication to the job over other interpersonal skills. Other skills employers valued pertained to animal welfare and safety. It was recommended stakeholders model characteristics that support and encourage honesty and integrity in the workplace. Educational institutions should develop programs for students that mimic real life/industry-based applications.

Symposium on CTE Leadership

9:15-10:45 a.m., Capistrano A, Floor 4
Chair: Samantha Godbey, University of Nevada, Las Vegas

Evaluating the Utility of a National Research Agenda for Career and Technical Education

Chaney Mosley, Middle Tennessee State University
Dr. Adam Manley, Western Michigan University
Dr. John Cannon, University of Idaho

It has been over 10 years since a national Career and Technical Education research agenda was last proposed. Much has changed, including an increased focus on CTE as an option to prepare students with college and career ready skills. Best practices suggest periodic review to determine if the research needs of our discipline are being met. The proposed symposium will provide CTE scholars an opportunity to review that agenda and discuss the utility of revising as we move into a new decade. The presenters seek the opportunity to provide an interactive platform in order for the CTE research community to discuss where the discipline has come from and where it is going into the 2020s. By the conclusion of the session, recommendations will be developed to guide the discipline in conducting a more thorough and in-depth review of the research agenda and a direction for a potential revision process.

Symposium on CTE Teacher Preparation

9:15-10:45 a.m., Capistrano B, Floor 4
Chair: Howard Gordon, University of Nevada, Las Vegas

Developing CTE Teachers: Facilitating Successful Preparation and Certification

Elaine Adams, University of Georgia
Cynthia Pellock, Pennsylvania State University
Mary Jo Self, Oklahoma State University
Alexis Williams, University of Georgia

Institutions responsible for providing CTE teacher preparation and managing licensure/certification must now demonstrate candidate success beyond traditional type assessment structures. Participants will receive an overview of CTE teacher certification preparation requirements and processes from teacher educators. Practices, assessments, strategies, and required documentation will be described. Preparing CTE teacher candidates to effectively and successfully complete the certification process will be discussed. Supplemental resources offering guidelines and best practices

will be provided. Insights to the organization, planning, successes, and challenges associated will be showcased by teacher educators. Suggestions from CTE teacher educators will be shared in order for colleagues to assist their own candidates through the process. Discussion from session participants will be encouraged via group driven activities.

Trends and Challenges for Workforce Education: Enhancing the Discipline

Barbara Hagler, Southern Illinois University
Elaine Adams, University of Georgia
Sally Arnett-Hartwick, Illinois State University
Alexis Williams, University of Georgia, University

Workforce education is at a critical juncture and is facing many trends and challenges. The symposium will facilitate a discussion to help attendees better understand trends and challenges impacting the discipline and will generate potential ideas for methods of successfully handling the identified trends and challenges. Goals include the following: identify trends affecting workforce education programs, educators, and graduates; identify challenges affecting workforce education programs, educators, and graduates; and identify solutions or ways of best handling the identified trends and challenges. The main goal is to facilitate a positive discussion that will provide support for workforce education educators, their students, and their programs.

Round Table Discussions and Past President Insights (with Lunch)

10:45 a.m.-12:25 p.m., Laguna A & B, Floor 4
Chair: Dee Chambliss, National Academy Foundation

A round table discussion is a conversation among a small group of people about a topic of common interest. This session will feature three 25-minute rounds, along with a boxed lunch you can enjoy along the way. In one 25-minute round, a leader will introduce the topic, and the participants will follow with discussion and feedback. Feel free to ask questions, and share contact information for future collaborative, interstate studies.

- 10:45 Find a table with a topic that interests you.
- Review of the rules.
- 10:55 Round 1
- 11:20 Move to a new table.
- 11:25 Round 2
- 11:50 Pick up your boxed lunch. Move to a new table.
- 12:00 Round 3

#1 Postsecondary Career and Technical Education (CTE) Teacher Preparation and Student Achievement in Career Certificate Programs

Lisa M. Martino, University of Central Florida
Career and technical education (CTE) teacher preparation and pedagogical training may be an important factor in student achievement and outcomes. However, to date, there has been little research into the effectiveness of postsecondary CTE teacher pedagogical knowledge on student outcomes. The purpose of this research-in-progress study is to examine the relationship between the level of CTE teacher education preparation and student achievement in postsecondary public institutions with career certificate programs. Student achievement is defined in this study as successful student learning by passing an industry certification test, career certificate program completion, and employment outcome six to twelve months after completion of the career certificate program. A quantitative causal-comparative, quasi-experimental design will be used.

#2 Self- Efficacy of Alternately Certified FCS Teachers in Texas

Kristie Storms, Texas Tech University
 Family and consumer sciences in the state of Texas are facing a teacher shortage issue. Many school districts turn to alternative teacher certification to fill vacant FCS positions. The purpose of this study is to explore the level of self-efficacy that alternative certification teachers report within the teaching and learning domain. The research question addressed in this study is: How efficacious are alternately certified FCS teachers in the state of Texas in the teaching and learning domain? The theoretical framework that guided this study is Albert Bandura's theory of Self Efficacy. This quantitative study utilizes survey research methodology to analyze teachers perceived levels of efficacy. The results of this study may help determine appropriate professional development opportunities for alternately certified FCS teachers.

#3 An Examination of the Experiences of Community College Students Who Participate in SkillsUSA: A Case Study Approach

Laura G. Maldonado, North Carolina State University
 Studies have investigated career and technical student organizations (CTSOs) at the secondary level but the value of CTOSs is less known at the postsecondary level. The purpose of this research-in-progress qualitative case study is to explore the experiences of community college students who participate in SkillsUSA, a CTSO. Qualitative data will be gathered from students, advisors, and alumni at two community colleges through interviews, observations, and documents. The study will provide an application of the psychology of working theory to community college populations, identify supports and barriers that may exist at SkillsUSA chapters, and inform policymakers and institutions about how SkillsUSA can connect and contribute to economic and postsecondary attainment goals.

#4 Career and Technical Education Health Science Teachers: Factors Connected to Teacher Retention

Jodi Adams, University of Louisville
 Nurses who transition into teaching serve at the intersection of two critical workforce shortage areas. Both career fields struggle to find enough practitioners to satisfy the national demand. Career and Technical Education (CTE) health science pathways are uniquely positioned to address this shortage, yet a teacher recruitment and retention problem presents a barrier to CTE programs, exacerbating the shortage. This study examines those individuals who make the decision to further both fields by teaching in a secondary or postsecondary nursing pathway through analysis of variables connected to veteran nursing instructors. A quantitative correlational design study using analysis of variance will be conducted to measure the association between various demographics of nurses entering the teaching profession and the number of years the nurse has stayed in the profession to determine the next steps in recruiting and retaining increased numbers of health science educators.

#5 From Food Deserts to Gentrification: Reconceptualizing the Impact of CTE Courses in Urban Education

Kevin Hillman, Indiana University Purdue University Indianapolis
 This conceptual paper will discuss how participatory action research (PAR) and collaborative engaged research can be used to reconceptualize the impact of career and technical education (CTE) within urban education. This research will obtain knowledge about inequities and social injustices effecting students. This knowledge is important in order to examine the potential of CTE courses beyond workforce alignment.

#6 Good Enough is Good Enough: Actor Networks in Vocational Education and Training

Katherine M Caves, ETH Zurich
 Vocational education and training (VET) programs need to link the education system to the employment system. To do so, they operate as networks of schools, governments, training firms, and intermediaries like industry or employers' associations. However, the dynamics of these networks have not been investigated. This project examines the actor network of the Swiss VET program, which is the dominant upper-secondary-level program in Switzerland. We find that actors are interconnected and generally satisfied, though relationship strength and satisfaction vary. The interfaces between education- and employment-system actors seem to be especially important, as are intermediaries.

OTT Annual Membership Meeting

12:30-1:30 p.m., Oceanside, Floor 4
 Elaine Adams, OTT Advisor, Presiding

Research Paper Presentations on CTE in Secondary Education

1:30-3:00 p.m., Malibu, Floor 4
 Discussant: Maniphone Dickerson, Evergreen Valley College
 Chair: Linda Martinez, California State University Long Beach

Did School Engagement Mediate the Relationship between Career and Technical Education Participation and High School On-Time Completion?

Xue Xing, University of Nevada, Las Vegas
 Howard R. D. Gordon, University of Nevada, Las Vegas
 Prior studies have examined the influence of career and technical education (CTE) curriculum on high school completion, however, few studies provided direct empirical evidence on how CTE worked. Using the High School Longitudinal Study of 2009 (HSL:2009), this study examined public high school students' CTE experience from three integral aspects (coursework, career and technical student organizations, and work-based learning) and investigated whether these experiences influenced high school on-time completion through school engagement. Results indicated that CTE coursework had the strongest positive influence on on-time completion. Mediating effects of selected school engagement variables existed for most CTE activities.

A Comparative Analysis of Student Engagement in Career Academies and a Comprehensive High School

Edward C. Fletcher Jr., Ohio State University
 Tony Tan, University of South Florida
 Victor M. Hernandez-Gantes, University of South Florida
 The purpose of this study was to examine and compare the student engagement of career academy students to those at a traditional comprehensive high school. We operationalized student engagement using a multi-dimensional construct of behavioral, cognitive, and emotional. We found that academy students had higher levels of cognitive and emotional engagement than those at comprehensive schools. Nonetheless, we found no statistically significant difference in the level of behavioral engagement compared to comprehensive school students. Based on our findings, we recommend that school administrators in comprehensive schools assess the feasibility of developing one or more career themed academies with high fidelity to the academy model (i.e., small learning community, student cohorts, and partnerships with community through advisory boards).

Collaborative Multisector Education through Community Partnerships

Maija, Thiel, University of Washington

This comparative case study of contrasting models of collaborative efforts within two communities focused on how the multisector educational partnerships were established and sustained; involved increased access to skilled careers; and were influenced by relational interdependence. The narrative and thematic analysis of the efforts at each site is followed by a summary of five common strengths/challenges experienced: structures, relationships, communication, tenacity, and vision. The primary finding from the research was that individuals in key roles within each organization were the critical factors in efforts to establish and sustain such collaborative programs designed to address complex community challenges.

Research Paper Presentations on CTE Continuing Certification

1:30-3:00 p.m., Oceanside, Floor 4

Discussant: Donna Westfall-Rudd, Virginia Tech University

Chair: Jay Plasman, The Ohio State University

A Case Study of CTE Teacher Retention: Transitioning from Mid-Career to Veteran Teacher Status

Nicole A. Graves, South Dakota State University

Laura L. Hasselquist, South Dakota State University

Schools across the country are facing a shortage of Career & Technical Education (CTE) teachers. Variables associated with CTE teacher attrition such as low pay, absence of adequate teaching resources, and lack of administrative support have been noted throughout the literature. The current study aimed to identify developmental experiences associated with teacher retention via focus group interviews with mid-career (7-15 years) and veteran (20+ years) CTE teachers. A comparison of the two groups was conducted in attempt to identify gaps in developmental experiences that could be used to inform programming and develop support systems to help mid-career teachers transition to veteran status.

Agricultural Education Student Teachers™ Curricular Needs Regarding the National AFNR Career Pathways

Carley S. Snider, Chattanooga Public Schools

J. Shane Robinson, Oklahoma State University

M. Craig Edwards, Oklahoma State University

Robert Terry, Jr., Oklahoma State University

This exploratory, pilot study assessed the perceived levels of importance and competence of student teachers in agricultural education regarding their ability to teach across the National Agriculture, Food, and Natural Resources (AFNR) Career Pathways. Using a congruent, parallel mixed-methods design, data were collected through questionnaires, interviews, and field notes with 16 student teachers. Descriptive statistics and eclectic coding were used to explain the quantitative and qualitative findings. Though the study cannot be generalized, findings were assessed using a needs assessment model to identify competence needs of the student teachers in regard to teaching across the eight National AFNR Career Pathways. Student teachers perceived all pathways to be important to teach but varied in their competence to teach them.

Non-Degree Credentials: What is Quality?

Michelle Van Noy, Rutgers University, Education and Employment Research Center

In the growing credentialing landscape, how to assess the quality of non-degree credentials is an increasingly complex and difficult challenge. Many stakeholders, including credential seekers, employers, higher education institutions, and policy makers, are grappling with this issue. This paper offers a conceptualization for non-degree credential quality including four key elements: credential design, demonstrated competencies, translational processes, and outcomes of value. This conceptualization can help guide efforts to develop quality measures.

Research Paper Presentations on International Issues in CTE

1:30-3:00 p.m., San Clemente, Floor 4

Discussant: Lisa Brown, University of South Florida

Chair: Jodi Adams, University of Louisville

Factors and Barriers that Impact Reform of Vocational Education and Training in Serbia

Katherine M. Caves, ETH Zurich

Implementing reforms requires as much guidance from research as does developing policy in the first place. This study applies a literature-based determinant framework of reform implementation in vocational education and training (VET) to the implementation of the dual education law in Serbia. We use the framework to develop hypotheses for major success factors and barriers using document analysis and interview data. We find that the content of the reform its strategy and accountability mechanisms are likely to be a barrier due to being unclear and complex. However, the commitment dimension political will and cooperation is a success factor. The other dimensions are unclear. The framework is a useful tool for developing hypotheses and organizing implementation research.

Development of the Korean Teachers' Occupational Work Ethic Scale: Its Factor Structure, Validity and Reliability

HwaChoon Park, Korea Research Institute for Vocational Education & Training

Roger B. Hill, University of Georgia

The Teachers' Occupational Work Ethic Scale (TOWES) was developed for assessing teachers' work ethic in South Korea. Based on an extensive literature review on work ethic instruments and interviews of 15 principals from elementary, middle, and high schools, 77 initial items were developed. Content and face validity of the items were examined by a panel of experts. A total of 388 teachers across elementary, middle, and high schools provided usable data. Factor analyses verified the scale's structure as fitting a four-factor model: integrity, interpersonal skills, respect of students, and professional development. Construct validity of the TOWES was established by scores of each of the four factors being moderately correlated. Internal consistency was examined using coefficient alpha scores. Implications and suggestions for further studies and practice are discussed.

Factors associated with employment intention of agriculture school students in Korea

Kyungin Kim, Pennsylvania State University

Areum Han, University of East Anglia

This study analyzed the factors that determine the employment intention of agriculture school students. This study used the data from the Korea Rural Economic Institute. Frequency analysis and logistic regression were implemented. Consequently, (1) the more highly those students evaluate their own competencies and employability, (2) the lower their educational aspirations, (3) the more their parents' occupations are related to blue-collar jobs, and (4) the more they are satisfied with the career education in schools, the more students are likely to select 'employment' first. These four factors make the students more likely to choose 'employment' after graduation rather than pursuing higher education or not deciding their career. Based on the results, this study provided several implications. The findings of this study will be useful to teachers and students in agriculture schools as well as policy makers within South Korea.

Symposium on CTE Faculty Development

1:30-3:00 p.m., Capistrano A, Floor

Chair: Samantha Godbey, University of Nevada, Las Vegas

Community and Technical College Faculty Development and Support

Matt Spindler, Northeast Wisconsin Technical College
Robert Vanschyndel, Northeast Wisconsin Technical College
Jason Zapf, Northeast Wisconsin Technical college

The objective of this symposium will be to share information about strengthening the capacity of community and technical college faculty to impact individual learners. Presenters will share information and guide activities to generate ideas about: a) a vision for community and technical college teaching excellence; b) quality assurance of community and technical college curriculum, instruction, and assessment; c) improving community and technical college faculty leadership in faculty development and teaching excellence; and d) supporting entry level and mid-career community and technical college faculty. Small group activities will generate and capture novel concepts and strategies which will be shared and summarized during the symposium. Following the symposium all information generated will be collected, distilled, and shared with CTE stakeholders.

Symposium on Work Based Learning

1:30-3:00 p.m., Capistrano B, Floor 4

Chair: Howard Gordon, University of Nevada, Las Vegas

Collaborations to Develop a Postsecondary CTE Researcher Network

James E. Bartlett, II, North Carolina State University
Michelle E. Bartlett, North Carolina State University
Patrick Bourke, ECMC Foundation
Frankie Laanan, University of Alabama
Sam Manbini, University of Alabama
Adam Atwell, University of North Carolina Charlotte
Laura Maldonado, North Carolina State University
Sara Shaw, University of Nevada, Las Vegas
Jordan Dolfi, North Carolina State University

This symposium overviews techniques from a year-long program to develop capacity of 16 postsecondary CTE researcher fellows. Perspectives from stakeholders including the foundation, leading CTE researchers, and research fellows will be provided. The session describes training institutes, webinars, the mentoring process, and research projects. Resources for developing researchers that will be available to the field will be presented. The session provides an update on the state of postsecondary CTE research and highlight projects that fellows are completing that seek to improve student success in postsecondary CTE. The symposium provides researchers, policymakers, administrators, business partners, and workforce development professionals the importance of developing high-quality researchers that can work with practitioners in the field to understand how postsecondary CTE impacts student success.

Poster Session Set-Up

2:30-3:00 p.m., Laguna A & B, Floor 4

Poster Session

3:00-4:15 p.m., Laguna A & B, Floor 4

Chair: Michelle Bartlett, North Carolina State University

#1 Learning Outcomes of a Poverty Simulation among FCS Students

Sally E. Arnett-Hartwick, Illinois State University

Can participating in a poverty simulation transform professional growth among FCS students? FCS students participated in four poverty simulations during class sessions. Logistics and assessments used will be described. Positive results indicated evidence of the simulation as a valuable teaching tool and the developmental impact among students.

#2 Compassion Fatigue and Burnout amongst CTE Teachers

Nicole A. Graves, South Dakota State University
Laura L. Hasselquist, South Dakota State University

To date, many of the studies related to compassion fatigue have been focused on medical and clinical professionals such as nurses, doctors, psychotherapists, and counselors. However, teachers are also recognized as members of the "helping" professions (Skovholt & Trotter-Mathison, 2016) and thus more should be learned about their risks of compassion fatigue and burnout. Given the documented shortage of CTE teachers (U.S. Department of Education, 2017), retention of CTE teachers is important. Learning more about stress and compassion fatigue can further inform programming and support systems aimed at CTE teacher retention and student success. The current study included the use of the Professional Quality of Life Scale to measure compassion fatigue in current CTE professionals in a rural, midwestern state.

#3 The Effects of Career Education Curriculum on College Graduates' Job Satisfaction and Career Choice: Talents, Interests, and Majors

HwaChoon Park, Korea Research Institute for Vocational Education & Training
Cheon Soo Park, Korea Research Institute for Vocational Education & Training

The purpose of this study was to describe the trends of the participants in career education curriculum and to examine the effects of career education courses and programs on college graduates' career choice: how their jobs are congruent to their talents (interests) and match with college majors; and on their overall job satisfaction. Data were obtained from the 2015 Graduates Occupational Mobility Survey (2015GOMS), which is a panel survey of a representative sample of Korean Graduates conducted by the Korea Employment Information Service every year. A total of 12,077 participants were used as a sample for this study. Logistic and ordered logistic regression models were conducted to analyze the data. The result of the study revealed that about 72.65% of the graduates participated in career education courses and programs; one student attended 2.47 programs on average at college. Career assessments and career courses were the most frequently selected while the career camps and job experiences were taken the least. Majors, geographical locations of colleges, and the types of industries also affected students' choice of career education courses and programs. Finally, job experiences and the degree of preparation of employment at college influenced graduates' career choice based on their talents and interests, job satisfaction, the degree of congruence between majors and career. Based on the findings of the study, implications, and suggestions for further studies are discussed.

#4 Improved Graduation Rate Through the NAF Design - Transforming the High School Experience

Nicholas Minar, NAF

Dee Chambliss, NAF

Insufficient college/career preparation during the high school years may prevent youth from a seamless transition to the postsecondary and workforce environments. NAF, an education nonprofit that focuses on small, career-themed learning communities, is attempting to change this through an educational design that focuses on college and career readiness by adopting an academy design. This study followed 7,406 NAF and 14,679 non-NAF students throughout their high school careers and examined the impact of NAF involvement on graduation rates. Findings demonstrated that NAF students (86% minority and 71% free/reduced lunch) were significantly more likely to graduate on time compared to their non-NAF peers. These findings have implications for effectiveness of career and technical education and are supported by previous research.

#5 NAF Student Internship Study: Impact and Engagement

Dee Chambliss, NAF

Nick Minar, NAF

Internships are a vital component of the NAF educational design. This study was designed to curate data from various data sources, previous studies, and new research regarding internships and their impact on students. Data was collected from multiple sources including NAF internship data, academy observations, intern completers, academy leaders, and internship provider interviews and focus groups, and student post-internship surveys. The research showed that students who have completed internships are observed by themselves, their supervisors, academy leaders, and advisory board members to make significant gains in academic and important workplace skills. Every intern interviewed reported that their internship was a valuable experience. A classification scheme for internships was developed. The largest source of internships is local small businesses.

#6 Occupational Concentrators in the Labor Market: How Do Non-College Goers fare?

Jay Plasman, Ohio State University

Recent federal education policies and initiatives in the United States have emphasized the importance of college and career readiness and showing up in school. The Carl D. Perkins Career and Technical Education Improvement Act provides federal funding for career and technical education (CTE) in the country, and key pieces of the act focus on increasing participation in career training coursework related to high demand and high paying careers, with a specific emphasis on math and science fields. How does such training prepare non-college going individuals for participation in the labor market? Among non-college goers, individuals who concentrate in CTE were expected to earn more in the labor market immediately after high school.

#7 The new Perkins V and CTE for students with disabilities: What the Perkins Collaborative Research Network (PCRN) data tells us and implications for future research.

Michael W. Harvey, Pennsylvania State University

This poster presents the Perkins Collaborative Resource Network (PCRN) data for students with disabilities (SWD) participating in secondary CTE over a six-year time-period (2011-12 to 2016-17). This data is not represented in the professional literature and critical questions are raised concerning national enrollment trends/patterns for SWD in CTE. CTE can meet the workforce demand associated with jobs in the 21st century labor force (Imperatore & Hyslop, 2017). Secondary CTE also holds promise for SWD concerning post-school employment outcomes (Rabren, Carpenter, Dunn, & Carney, 2014; Wagner, Newman, & Jauitz, 2015). More research is needed in this area. Data will be discussed in the context of Perkins V (PL 116-6) and

other legislative initiatives (e.g., ESSA, 2015, IDEA, 2004, WIOA, 20124).

#8 High School Career and Technical Education Course Taking: Who and Why?

Xue Xing, University of Nevada Las Vegas

Tiberio Garza, University of Nevada Las Vegas

Margarita Huerta, University of Nevada Las Vegas

Given the shift in career and technical education's (CTE) purpose and the potential benefits to all students, it is important to understand who is taking CTE credits and why. Using the High School Longitudinal Study of 2009 (HSL:2009), we investigated CTE course-taking patterns and literature-based individual and social factors. Results indicated, on the one hand, CTE continues to serve the traditional profile of students (i.e., Black, male, and students with special needs). In our data, they were overrepresented as CTE concentrators. On the other hand, a wide range of students is taking CTE courses. No particular group of students were over or underrepresented as CTE participants. Individual and social factors were influential but varied by specific course-taking patterns.

#9 Reliability Analysis and Development of the CTE Administrator's Self-efficacy Survey Instrument

Kemaly Parr, Murray State University

Michelle Conrad, University of Central Missouri

Larae Watkins, University of Central Missouri

David M. Yost, WVU Tech

Howard R. D. Gordon, University of Nevada, Las Vegas

Researchers have found many career and technical education administrators are not fully prepared for the unique challenges found in the administrative domain of career and technical education (CTE). Tools for identifying specific needs of CTE administrators are lacking, thus prompting the development of the CTE Administrator Self-Efficacy (CASES) survey instrument. The CASES survey instrument can identify professional development and instructional training necessary for enhancing the CTE administrator's leadership and management abilities. CTE administrators will benefit from the CASES self-assessment by identifying their strengths and weaknesses. CASES will affect change within the field of CTE, as it will set the stage for training and professional development needed to assure the success of CTE administrators as sound leaders of their school communities.

#10 A Social Cognitive Perspective of Pursuit of Community College Education

Xue Xing, University of Nevada, Las Vegas

Jay W. Rojewski, University of Georgia

This study used the High School Longitudinal Study 2009 dataset and tested students' postsecondary education pursuits with social cognitive career theory (SCCT; Lent, Brown, & Hackett, 1994, 2000). Previous studies focused on pursuit of 4-year universities but few studies examined students who go to community colleges. Results showed that potential first-generation college students (PFGCS) attained postsecondary education at a much lower rate than non-PFGCS. However, PFGCS enrolled in community colleges at a higher rate. For all students, the higher the self-efficacy, the higher the education expectations and education goals a student will set. Contextual support from parents and friends and barriers (i.e., lack of support, work for college, and financial concerns) yielded only direct effects to education goals.

Meet the Journals

3:00-4:15 p.m., Laguna A & B, Floor 4

Career and Technical Education Research (CTER)

Published by ACTER
Michelle Bartlett, Editor
Katherine Kandalec Holm, Editorial Board Chair

Journal of Career and Technical Education (JCTE)

Published by OTT
Sally Arnett-Hartwick, Editorial Board Member

International Vocational Education and Training Journal (IVETA Journal)

Published by IVETA
Sandra Poirier, IVETA Vice President for North America

Journal of Research in Technical Careers

Published by University of Nevada, Las Vegas, Department of Teaching and Learning
Samantha Godbey, Co-Editor; Howard R. D. Gordon, Co-Editor

Online Journal of Workforce Education and Development

Published by Southern Illinois University, Workforce Education and Development Program
Barbara Hagler, Professor

Workforce Education Forum

Published by Pennsylvania State University, Professional Personnel Development Center for CTE
Michael Harvey, Editorial Board Member

ACTER Annual Membership Meeting and Closing Session

4:30-6:30 p.m., Capistrano A & B, Floor 4
Cynthia Pellock, ACTER President, Presiding

Business Meeting

Presentation of ACTER Annual Recognition Awards

2019 President's Closing Address

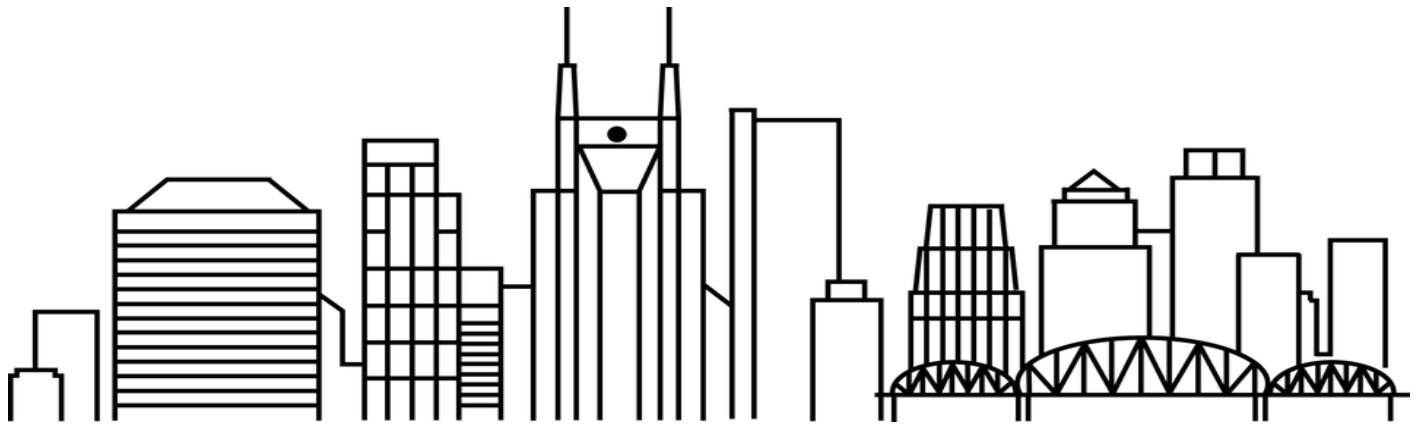
Presentation of Conference Awards

Outstanding Symposium
Awarded by The Academy for Career Technical Teacher Education
Presented by Elaine Adams

Outstanding Research Poster
Awarded by Omicron Tau Theta
Presented by Elaine Adams

Outstanding Research Papers
Awarded by the Association for Career and Technical Education Research
Presented by Xue Xing

Save the Dates



2020

CTE Research and Professional Development Conference

Nashville, Tennessee

December 1-2, 2020

Proposal Deadline:
May 31, 2020

Check <http://www.acteronline.org> in January for the Call for Proposals.

~ ~ ~ Thank You ~ ~ ~

This conference would not be possible without the service of many volunteers.
We appreciate your commitment to scholarship in Career and Technical Education.

Conference Preparation

Conference Planning Committee

Elaine Adams, University of Georgia
Mari Borr, North Dakota State University
John Cannon, University of Idaho

Cynthia Pellock, Penn State University
Jack Elliot, Texas A&M University
Xue Xing, University of Las Vegas, Nevada

Proposal Reviewers

Posters

Jeno Rivera, Michigan State University
Barbara Haglar, Southern Illinois University
Keith Waugh, Valdosta State University
Alexis Williams, University of Georgia

Barry Croom, University of Georgia
Shaun Dougherty, Vanderbilt University
Paula Faulkner, North Carolina Agriculture and
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Paul-Arthur Pierre-Louis, North Carolina State
University
Ingeborg Plackle, Vrije Universiteit Brussels
Jay Plasman, The Ohio State University
Matt Spindler, Northeast Wisconsin Technical College
Carol White, Mississippi State University

Symposia

Katherine Kandalec Holm, Athens State University
HwaChoon Park, Korea Research Institute for
Vocational Education and Training
Kristin Stair, Louisiana State University
Chris Zirkle, The Ohio State University

Research Paper and Roundtable Reviewers*

Jodi Adams, University of Louisville
Ahmed Atef, George Mason University
Adam Atwell, University of North Carolina - Charlotte
Michelle Bartlett, North Carolina State University
Courtney Benjamin, State University of New York at
Binghamton
Katherine Caves, ETH Zurich
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*Thank you to Sara A. Shaw, University of Nevada, Las Vegas, for distributing conference proposals for review.

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<http://go.ncsu.edu/ctefellows/>

BIOS

Corinne Alfeld, Program Officer, CTE Research, National Center for Educational Research, Institute for Education Sciences (IES), U. S. Department of Education.

Dr. Corinne Alfeld is interested in identifying ways to maximize growth opportunities for students in secondary and postsecondary school and workplace contexts. She is fluent in current educational policy affecting adolescents and young adults and passionate about applying rigorous research methods to study programs and policies aimed at improving education and career opportunities for young people. Her particular area of expertise is career and technical education (CTE).

At the National Center for Education Research (NCER) at the U.S. Department of Education's Institute of Education Sciences (IES), Dr. Alfeld oversees several research grant program areas, including "Improving Education Systems" and "CTE". As a program officer, she works with applicants to improve their research grant proposals and with grantees to monitor their projects. She has also been working to mobilize researchers to study CTE via blog posts and conference presentations and participates in several intra- and inter-agency working groups on CTE.

Many of you may have read and referenced some of Dr. Alfeld's studies on adolescent motivation, engagement, achievement, career identity development, and school and work transitions. Between 2002 and 2012, she conducted research for the National Research Center for Career and Technical Education, including studies of Math-in-CTE, Career Technical Student Organizations, CTE Programs of Study, and Work-Based Learning.

Dr. Alfeld earned her BA in psychology from Vassar College, her MA in developmental psychology from the George Washington University, and her PhD from the University of Michigan's Combined Program in Education and Psychology program (CPEP). She was a postdoctoral research fellow at the Max Planck Institute for Human Development in Berlin, Germany in 1999-2000.

Shaun Dougherty, Associate Professor, Vanderbilt University

Dr. Dougherty's research and teaching focus on education policy analysis, causal program evaluation, and the economics of education. Specifically, he studies career and technical education, educational accountability policies, and the application of regression discontinuity research designs. Across these substantive areas, he emphasizes how education can address human capital development as well as issues of equity related to race, class, gender, and disability.

Dougherty's connection to CTE began through his work as a high school mathematics teacher and assistant principal. He is a PI or co-PI on three IES funded projects that analyze the effects of high school CTE on student outcomes, a co-lead for the IES funded CTE Research Network, and a co-PI on a policy research lab, the CTE Exchange (CTEx) at Georgia State University, that uses state longitudinal data systems to create standardized and generalizable approaches to analyzing state CTE data. In addition to funded work, Dougherty serves as a member of several IES-affiliated technical advisory boards aimed at improving CTE research and equity in CTE, he is a technical advisor to several Regional Education Labs, serves on the Department of Health and Human Service's Transitions to Adulthood Network, and is a technical advisor on several other funded research projects focused on understanding the effects of CTE. His work has been published in leading journals and has been cited by major media outlets. He has received research funding from IES, the Smith Richardson Foundation, and the Institute for Research on Poverty, which also recognized him as an Early Career Scholar. In addition, he is a Strategic Data Project Faculty Adviser through

the Center for Education Policy Research at Harvard University, and a faculty fellow with the Tennessee Education Research Alliance.

Dr. Dougherty has his B.S in mathematics and economics from the University of Massachusetts-Amherst, a M.S. in educational administration from Gwynedd Mercy University, and an EdD in quantitative education policy analysis from the Harvard Graduate School of Education.

Deputy Assistant Secretary Casey K. Sacks for Community Colleges, Office of Career, Technical, and Adult Education, U.S. Department of Education

Casey K. Sacks is the deputy assistant secretary for community colleges in the office of career, technical, and adult education at the U.S. Department of Education. She provides leadership for initiatives supporting career and technical education, adult education, correctional and re-entry education, and community colleges. These initiatives collectively serve over 25 million students each year.

Prior to assuming the role of deputy assistant secretary, Sacks served as the vice chancellor for the West Virginia Community and Technical College System. In West Virginia she led a statewide guided pathways initiative, expansion of apprenticeship and work-based learning programs, developed customized workforce training for employers, and served as acting chancellor.

Before that, Sacks served as the assistant provost for academic programs and innovation with the Colorado Community College System. During her tenure there, Sacks led two TAACCCT grants, statewide redesign of developmental education, redesign for credit for prior learning, and development of online and blended delivery for career and technical education programs in energy and manufacturing.

Sacks is an active Rotarian, frequent host mom for exchange students, and avid equestrian. She received her bachelor's degree from Colorado State University, a masters from the University of Colorado at Colorado Springs, and doctorate from Bowling Green State University.

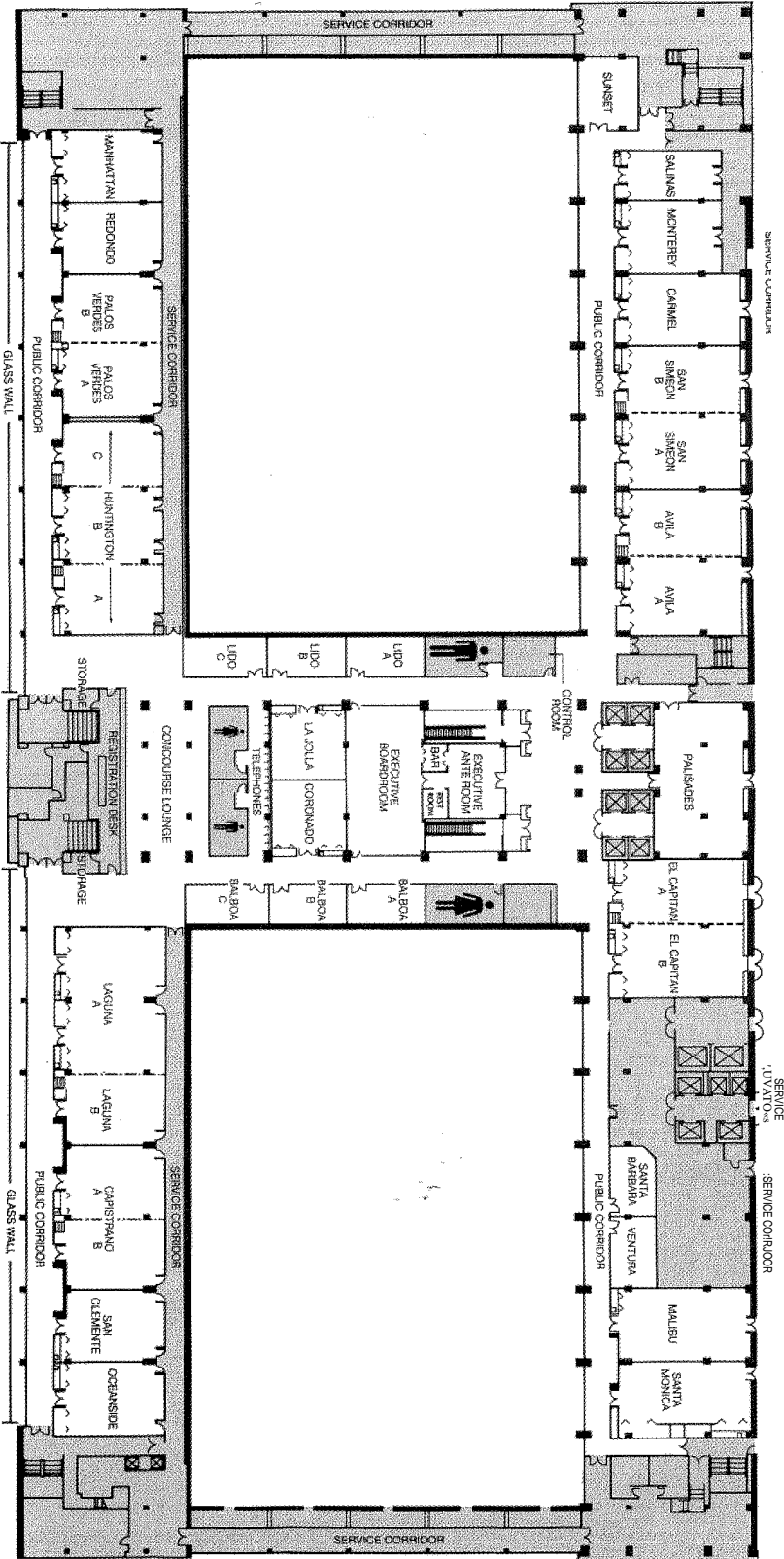
Notes:



Hilton Anaheim

CONCOURSE LEVEL

Fourth Floor



2019 Conference At-a-Glance

Tuesday, December 3

10:00 a.m.-2:00 p.m. Committee Meetings – Palos Verdes A & B Rooms

10:00 a.m. ACTER Executive & Conference Planning Committees - Palos Verdes B

Noon CTER Editorial Board – Palos Verdes A

1:00 p.m. JCTE Editorial Board & OTT Executive Committee – Palos Verdes B

2:00-5:00 p.m. IES Grant Writing Workshop – Palos Verdes A (successful applicants only)

Presenter: Corinne Alfeld, Program Officer, CTE Research, National Center for Educational Research, Institute for Education Sciences (IES), U. S. Department of Education.

5:00-7:00 p.m. Welcome Reception and CTE Research Network Presentation – El Capitan A & B

Presenter: Shaun Dougherty, Associate Professor, Vanderbilt University

7:00-8:30 p.m. Networking Sessions

7:00 p.m. First Timers Welcome and Orientation – Palos Verdes A

7:30 p.m. Fireside Chat for Graduate Students and Early Career Professionals – Palos Verdes B

Wednesday, December 4

7:45 a.m. Opening Session – Laguna A & B

Breakfast and keynote address by Deputy Assistant Secretary Casey K. Sacks for Community Colleges, Office of Career, Technical, and Adult Education, U.S. Department of Education

9:15 a.m. Symposia and Research paper presentations – Malibu, San Clemente, Oceanside, Capistrano A, and Capistrano B

10:45 a.m. Round Table Discussions and Past President Insights with lunch – Laguna A & B

12:30 p.m. OTT annual meeting - Oceanside

1:30 p.m. Symposia and Research paper presentations – Malibu, San Clemente, Oceanside, Capistrano A, and Capistrano B

2:30 p.m. Poster set-up – Laguna A & B

3:00 p.m. Poster Session and Meet the Journals - organized by OTT – Laguna A & B

Sponsored by the CTE Postsecondary Research Program at North Carolina State University, funded by the ECMC Foundation

4:30-6:30 p.m. ACTER annual meeting and Closing session – Capistrano A & B

Presentation of Outstanding Session Awards