

## **Welcome to the 2014 annual meeting of the North Carolina Association for Research in Education!**

Thank you for joining us for this year's meeting. As we change venues each year, we receive proposals from researchers in different parts of NC. This year we have presentations and posters from as far away as the University of North Carolina at Wilmington and as close as NCA&T and UNCG. Our luncheon panelists are recent graduates from the education leadership program at Wingate University speaking on how they use research in their roles in public education.

The annual NCARE meeting provides a unique opportunity. It is a time for the family of education researchers in North Carolina to gather. Besides the formal presentations, this gathering gives us the opportunity to build professional relationships that benefit not only researchers, but the education community by strengthening our ability to tackle the issues facing education at all levels. I hope you will find the sessions informative and your dialogue with other educational professionals rewarding.

Besides participating in this year's meeting, I encourage you to continue your relationship with NCARE by being an active member in the future! The organization relies on volunteers to run the organization and coordinate the annual meeting. This year has many examples of why we need strong attainable research on the educational systems in NC. More than ever, our researchers are needed to be the torch bearers to show our state's leadership the way to improve what we do for students at all levels, from Kindergarten to doctoral degrees. Thank you to all of those who generously contributed their time in organizing this year's meeting.

*Christopher I. Cobitz*  
NCARE President-Elect

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**Schedule at a Glance**

<b>Time</b>	<b>Event</b>	<b>Location*</b>
8:00 – 9:00	Registration & Continental Breakfast	Foyer
9:00 – 10:05	Session A	Triad East, Triad West, Triad Central
10:05 - 10:20	Break	Foyer
10:20 - 11:25	Session B	Triad East, Triad West, Triad Central
11:25 - 11:35	Break	Foyer
11:35 - 12:30	Lunch & Business Meeting	Georgia
12:45 - 1:30	Session C (General Session)	Georgia
1:40 - 2:20	Session D (Poster Session)	Georgia
2:30 - 3:35	Session E	Triad East, Triad West, Triad Central
3:45 - 4:30	NCARE Board Meeting	Triad East

*\*All rooms are on the second floor of the Marriott Greensboro Downtown located at 304 N Greene Street, Greensboro, North Carolina 27401*

**Thanks to the University of North Carolina Wilmington Watson College of Education for their generous donations to support the NCARE conference this year.**



**THURSDAY, FEBRUARY 20**

**Preconference Sessions 2:00 – 5:00 P.M.**

**Session A (Triad East)**

***The Value of Value Added: EVAAS, Accountability, and Student Progress***

Sandra Horn, Senior Educator Support Specialist

SAS® EVAAS® Value-Added Research and Assessment Services

Thomas Tomberlin, Director

District LEA HR Support, NC Department of Public Instruction

This session will provide an overview of EVAAS reporting, including a conceptual description of the gain and predictive value added models, and how EVAAS can be used in targeting on-going efforts to improve student progress at the district, school, and teacher levels.

Participants should bring their mobile devices with Internet capability.

**Session B (Cape Fear)**

***Introducing Powerful Tools for Qualitative Research***

Holly Downs

Aundrea Carter

Jonathan Rollins

Emma Sunnassee

Lindsey Varner

Department of Educational Research Methodology, UNC-Greensboro

In recent years, a plethora of digital tools have become available to researchers, leaving individual researchers the task of investigating the utility, efficiency, and appropriateness of these tools. This session will present tools and strategies for integrating qualitative digital tools throughout a research study, with particular emphasis on data collection and analysis. In addition, the digital tools presented will include applications that are licensed (i.e., available at cost to researchers) and those that are open-access (i.e., freely available to researchers). Tools to be covered include digital recording technologies such as digital recorders and digital pens, survey software such as Qualtrics and Survey Monkey, and qualitative data analysis software like NVIVO and RQDA. The training will conclude with implications for future use of these tools and the impact on practice.

Participants should bring their personal laptops to this presentation.

**NCARE SOCIAL: 5:30 – 7:30 p.m.**

**Marriott Greensboro Downtown, Suite 319**

*Join us for light hors d'oeuvres, drinks, and conversation with other NCARE members.*

## FRIDAY, FEBRUARY 21

*On-site registration is \$75 for new or renewing full-time student members, \$85 for new or renewing full members, and \$65 for current members. We accept checks on-site (payable to NCARE) as well as Visa and MasterCard.*

**Registration and Continental Breakfast: 8:00 – 9:00 a.m.**  
**Breakfast sponsored by UNC Wilmington, Watson College of Education**

*Breakfast includes coffee, tea, and assorted pastries.*



### Session A: 9:00 – 10:05 a.m.

#### **1. Teacher Issues (Triad West)**

**Jason Giersch, Moderator**

#### **Early Indications of the Impact of NC Senate Bill 402 on Preservice Teachers' Intentions: A Mixed Methods Study**

Katherine Ciccarelli  
University of North Carolina at Greensboro  
Kathy Griswold  
University of North Carolina at Greensboro  
Miguel Gomez  
University of North Carolina at Greensboro  
Cheryl Thomas  
University of North Carolina at Greensboro

The United States is facing a mounting crisis in education. Teachers are leaving the profession at unprecedented rates and according to the Program in International Student Assessment (PISA), student performance in the United States lags multiple countries. Furthermore, according to some estimates, approximately 30% of American high school students drop out before attaining a high school diploma. While it is evident a national crisis in education exists, insufficient information is currently available on what this means at the state and local levels. In July, 2013, the North Carolina Appropriations Act of

2013, also known as Senate Bill 402 was passed. This legislation made sweeping changes to an already strained North Carolina public school system that will likely encourage more teachers to leave the state and/or the profession. While it is too early to say for certain what the exact outcomes of this legislation will be, there is little indication that they will be positive. This article presents a mixed methods study conducted to explore preservice teachers' professional intentions in response to Senate Bill 402. Sixty-four students responded to a survey about teacher intentions. Also, three students participated in follow up interviews designed to gain more understanding of their stated intentions to leave North Carolina to teach elsewhere as a result of Senate Bill 402. Themes emerged during interviews that should be cause for concern for policy makers and others with an interest in education as it appears North Carolina may be heading for a "brain drain" in teacher talent.

### **Beginning Teachers' Experiences Working in a Low-Performing School with a Non-District Affiliated New Teacher Support Coach**

Adam Myers

University of North Carolina at Charlotte

Although schools and districts today provide induction programs including assignment of mentors to beginning teachers, the problem of retaining teachers past their first 3 years remains a critical problem, particularly in low-performing schools. Knowing that many beginning teachers lack experience and face a variety of challenges, novice teachers need comprehensive professional and emotional support not only to retain them in the classroom but also to improve their quality sooner. This qualitative study focuses on the North Carolina New Teacher Support Program, a Race-to-the-Top funded induction program that provides additional support to any beginning teacher who is placed in a high-needs school. The program provides teachers a full-time New Teacher Support Coach who is not affiliated with the district but instead an anchor university. This study examined the experiences of 14 beginning teachers working in low-achieving schools with the support of a non-district affiliated coach. The questions guiding this research were "How do beginning teachers perceive their first years of teaching in low-performing schools?"; "How do beginning teachers perceive the difference between non-district affiliated support coaches and support provided by the school and/or district?"; and "How has having a non-district afflicted coach impacted the self-efficacy and development of beginning teachers in low-performing schools? Findings suggest that novice teachers face challenges and surprises upon entering the profession and that beginning teachers valued the support provided by their non-district affiliated coach. Findings also suggest that having a non-district affiliated coach positively impacted the self-efficacy and development of beginning teachers.

### **The Implications of Teacher Motivation for Educational Administrators and Policymakers**

Michael Caprino

University of North Carolina at Chapel Hill

Student motivation has long been an important topic in educational research as multiple handbooks and a myriad of empirical journal articles have been written on the subject (Schunk, Meece, & Pintrich, 2014; Stipek, 2002; Wentzel & Wigfield, 2009). The motivation of teachers, however, has received comparatively less coverage in part because compelling conceptual frameworks have been lacking (Retelsdorf, Butler, Streblov, & Schiefele, 2010), even though teacher motivation is often viewed as playing a key role in how teachers teach (Pelletier, Seguin-Levesque, & Legault, 2002; Wild, Enzle, Nix, & Deci, 1997, Study 2). Additionally, motivation is likely to shape teachers' decisions to persist in the teaching profession, despite the many challenges facing teachers today. Given that half of beginning

teachers leave the profession within the first five years (Ingersoll & Smith, 2003), it is important to understand the role of contextual and individual factors in shaping teachers' motivation to teach.

This paper presentation will offer a new conceptual framework of teacher motivation rooted in self-determination theory. Deci and Ryan (2008) proposed that individuals have innate psychological needs for autonomy, competence, and relatedness, which need to be fulfilled in order for them to experience optimal motivation as well as desirable psychological, developmental, and behavioral outcomes. Deci and Ryan also emphasized how the social context in which individuals are embedded can either support or inhibit the fulfillment of these needs. Literature is reviewed in this paper presentation that connects teachers' experiences in the school context and how their needs for autonomy, competence, and relatedness are either fulfilled or not fulfilled under different school conditions. The analyses include a synthesis of research from multiple theoretical perspectives including organizational climate, teacher stress and burnout, and social cognitive theories. The new conceptual framework presented will provide new directions for future research as well as recommendations for educational policymakers and administrators. Specific topics will include administrative management style, high-stakes testing, professional development, new teacher induction, and school environment.

## **2. Administrators (Triad Central)**

**Janet Jenkins, Moderator**

### **Culturally Responsive Leadership: A Case Study to Describe Stakeholders' Perceptions of Culturally Responsive Leadership in a K-12 Public Charter School in North Carolina**

Kimberly M. Jones-Goodes  
North Carolina A & T State University  
Comfort Okpala  
North Carolina A & T State University

The purpose of this instrumental case study was to explore the culturally responsive leadership practices of charter school leadership through stakeholders' perceptions. The goals were 1) to explore how the school leadership team describe culturally responsive leadership in a K-12 charter school in North Carolina, 2) to explore how the teachers describe culturally responsive teaching and learning in a K-12 charter school in North Carolina, and 3) to explore how parents describe a culturally responsive home-school connection in a K-12 charter school in North Carolina. The study occurred in a K-12 charter school located in the Triad area of North Carolina of the United States and the school was selected based upon specific criteria. Because this study examined stakeholders' perceptions of culturally responsive leadership in a charter school a willing participant pool of charter school stakeholders was needed. The school leadership was unanimous in their belief that a culturally responsive leader established a welcoming and supportive school culture through their instructional leadership and created a sense of belonging for all stakeholders.

### **The Opinions of North Carolina Public School Superintendents Regarding Critical Issues Facing Public Education in North Carolina**

Alvin C. Proffit  
Appalachian State University  
George Maycock  
Appalachian State University

Educators in North Carolina are witnessing a time of change perhaps unequalled since the time of Brown v Board and Tinker v. Des Moines in the 1950s and 1960s. Examples of the current changes

challenging public schools in 21st Century North Carolina include the fact that all teachers in North Carolina are facing the impending reality of losing the opportunity to obtain tenure/career status, by 2018, even teachers currently tenured are scheduled to have their tenure removed from them unless the courts intervene; a system of merit pay for twenty-five percent of each systemic faculty is being forced upon all public school systems in North Carolina; tax revenues will be allowed to be used as payment to fund non-public schools; and local boards of education are being granted the opportunity to make personnel decisions without the recommendation, or support of system Superintendents of Schools. While teachers will eventually feel the brunt of these changes Superintendents of Schools presently find themselves at the center of this educational firestorm. This study is built upon the premise that the opinions held by public school superintendents are crucial in this time of political, social and educational upheaval.

### **Disincentives to Remaining a School Principal: Perspectives of German and U.S. Principals**

Dawson R. Hancock

University of North Carolina at Charlotte

Ulrich Müller

Pädagogische Hochschule Ludwigsburg, Germany

Dorothy Hayes

Caldwell County Schools

Janice Ellis-Lewis

University of North Carolina at Charlotte

The influence of school leadership on a school's performance is undisputed in both Germany and the United States. Despite its importance, recruiting and retaining principals poses significant challenges in both countries. The current study sought to determine factors that influence school principals' decisions to remain in their positions. Whereas previous research focused on the perspectives of aspiring principals enrolled in principal preparation programs in school leadership, the current study sought the perspectives of current school principals in the United States and Germany. Questioned about their levels of current and expected job satisfaction, this study uncovered important findings regarding areas in which principals in both countries were dissatisfied about the principalship. Implications for school leadership are discussed.

**Session B: 10:20 – 11:25 a.m.**

### **3. Higher Education Related Studies (Triad East)**

**Jennifer McGee, Moderator**

#### **“We Are Our History”: Institutional Decision Making and the Mission of the University**

Leslie Zenk

University of North Carolina at Charlotte

Over the years, many forces have caused shifts in higher education (Eckel, Hill & Green, 1998; Kerr, 1963; Levine, 2001). These changes affect the ways in which faculty deliver subject material, design courses, and interact with students – and ultimately how institutions enact their missions. Considering the changes, competing priorities, pressures from multiple stakeholders and declining resources that public institutions are facing, this presents an opportune time to study mission. There is a need to examine how today's administrators make decisions related to the academic core, the extent to which

they utilize and adhere to the mission during their decision-making processes, and the ways in which the culture of the institution frames and influences these decisions.

Through use of a cultural lens, the author explores connections between stated and enacted institutional mission, culture, and decision making using a qualitative, comparative case study design. The effect of institutional culture on decision-making can be revealed through the underlying, often implicit, forces that contribute to individuals' behaviors within the institution over time. Results indicate two primary institutional cultural factors can impact the use of mission in decision-making at public, masters-granting universities: institutional history and regionalism; results suggest that these are strong mechanisms by which institutions ground their enactments of their missions.

### **Those Who Can, Might: The Academic Achievement of College Students Majoring in STEM Fields and Considering Teaching**

Jason Giersch

University of North Carolina at Charlotte

One concern that parents, politicians, and taxpayers often raise is the academic background of the individuals teaching in schools. While scholars debate the strength of the relationship between educators' academic achievement and teaching abilities, some studies suggest that secondary math and science classrooms may improve if staffed by academically high-achieving graduates. At what stage of their education or careers do high-academic achievers rule out teaching? This study uses a longitudinal, state-wide dataset to compare the students majoring in STEM fields and taking teacher-preparation coursework to students in those same majors who are not pursuing teaching credentials. I find that academic backgrounds, as measured by their SAT scores and high school grades, do not differ much between the two groups. If the adage "those who can't, teach" is at all true, that pattern does not materialize until after graduation from college.

### **Race and Class Diversity at Selective Regional Institutions: A Critical Research Synthesis of K-12 Educational Opportunity for Equitable Admissions**

Brandy Wilson

Appalachian State University

Madelyn Rindal

Appalachian State University

Mary Lyons

Appalachian State University

Ian Selig

Appalachian State University

As this presentation will demonstrate, the extant research on educational equity offers important considerations to better understand the barriers of selective universities' admissions criteria for particular students of Color and students from low-income families. For example, the intersection between race and poverty demonstrates that students of Color are disproportionately living in poverty and are doubly segregated by race and socioeconomic status in public K-12 schools where they have less and inferior opportunities for academic advancement. Thus, the purpose of this project is to synthesize the literature that illustrates the myriad ways in which students of Color and students from low-income families (as a group) are often unprepared and underprepared to compete with middle-class White students for admission into selective universities where admission is based mostly on criteria often under- or un-available to these underrepresented groups. Major outcomes that we hope to accomplish with this project include expanding higher education opportunities for students from underrepresented

groups by providing universities and admissions counselors' justification for admitting students who might not meet stringent course, GPA, and testing criteria, but show promise in other ways.

#### **4. Special Public School Populations (Triad West)**

**Tamara Walser, Moderator**

##### **The Impact of School Size on the Achievement of Students with Limited English Proficiency at Middle School Level: Evidence from North Carolina**

Wenyang Sun

University of North Carolina at Chapel Hill

This paper examines the influence of middle school size on LEP students' achievement and the achievement gap between LEP student and non-LEP student using data from North Carolina in year 2011-2012. Using quantitative methods, particularly ANOVA analysis, this paper build two models to test two hypotheses. First, the larger of school size has a negative impact on LEP students' achievement at middle school level. Second, the achievement gap between LEP students and non-LEP students increases as middle school size grows. The results of analysis reject the first hypothesis while support the second one, which underscores the negative effect of large schools on the discrepancy between LEP students' academic performance and the performance of students with higher English proficiency.

##### **Measurement Invariance of the Teaching Strategies GOLD® Assessment Tool for English Language Learners and Children with Disabilities**

Do-Hong Kim

University of North Carolina at Charlotte

Richard G. Lambert

University of North Carolina at Charlotte

Diane C. Burts

Professor Emeritus, Louisiana State University

The purpose of this study was to investigate the item-level measurement equivalence of the Teaching Strategies GOLD® assessment system across subgroups of kindergarten children based on their primary language and disability status. Differential item functioning (DIF) analysis using the ordinal logistic regression procedure was conducted to determine whether items functioned differentially between children with and without disabilities, between English language learners (ELLs) and non-ELLs, and between Spanish-speaking ELLs and non-ELLs. There was little evidence that the items were functioning differently across groups, which suggests that the instrument is equally valid and reliable for typically developing kindergarten children and for children with disabilities and for those whose home language is not English.

##### **Effects of systematic instruction and AAC on phonics skills acquisition of students with moderate or severe disabilities who are nonverbal**

Lynn Ahlgrim-Delzell

University of North Carolina at Charlotte

Angela I. Preston

University of North Carolina at Charlotte

Amy Kemp-Inman

University of North Carolina at Charlotte

A randomized control trial was conducted to measure the effects of a curriculum called Early Reading Skills Builder (ERSB) on phonics skills of students with moderate or severe disabilities and autism. A total of 17 students in Grades 1-8 were randomly assigned to either the ERSB curriculum or a comparison group and received instruction for one academic school year. ERSB is an iPad® application designed as a reading curriculum to teach students who were mainly nonverbal to read and comprehend decodable text. Students in ERSB received lessons in a one-on-one format for typically 30 minutes per day. Students in the comparison group received sight word instruction using the iPad® in a one-on-one format in addition to their daily reading instruction. Student progress in phoneme identification, blending words, and decoding words were measured through a monthly curriculum-based measure (CBM). Results from a Repeated Measures Analysis of Variance (ANOVA) indicated statistically significant interaction effects for (a) individual phonemes [ $F(7, 31) = 3.7, p = .001$ ], (b) decoding [ $F(7, 31) = 6.14, p < .01$ ], and (c) total score [ $F(7, 31) = 7.32, p < .01$ ]. Blending was not statistically significant [ $F(7, 31) = 1.19, p = .310$ ]. Students in ERSB outperformed students in the control group on phoneme identification and decoding words. Students in both groups improved their ability to blend words. Further analysis and results, limitations, and implications for practice will be discussed with session attendees.

## **5. Math Instruction Related Studies (Triad Central)**

**Sandra Dika, Moderator**

### **A Case Study of the Early Implementation of Common Core State Standards in Mathematics in a Parochial Middle School in North Carolina**

Candace Mazze, Ed.D

University of North Carolina at Charlotte

The adoption of the Common Core State Standards (NGACBP, 2010) in response to US student performance on national and international educational assessments represents the first change to mathematics standards in North Carolina in over a decade. The process of curriculum change not only involves an understanding and implementation of material and standards on the part of teachers, but also the ability and willingness to adjust one's prior belief system and perceived abilities. Educators interpret curriculum change in varied ways—some see it as a substantial change in practice and adjusting instruction; others view it superficially, making very few changes (Robelen, 2013). Student achievement barely improves during such ambiguity. A case study of teacher perceptions of the Common Core State Standards in Mathematics implementation at a parochial middle school was undertaken in spring 2013 to understand the adoption and practice of new curriculum standards in terms of preparation, feelings of self-efficacy and perceived effects on student learning during the initial implementation year. The descriptions generated by the study can provide insight to student learning and teachers' perceived abilities to teach under the curriculum change and be useful in the planning and ongoing implementation of teacher training and professional development in North Carolina.

### **Examining the Interplay between Technology Integration and Mathematical Tasks in Elementary School Classrooms**

Drew Polly

University of North Carolina at Charlotte

This paper presents the findings of a year-long study in which the author frequently observed three Elementary School teachers' enactments of technology into their mathematics teaching. Each teacher was observed between 25 and 30 times during the school year. Using empirically-based observation

frameworks, the researcher analyzed both the types of mathematical tasks posed while teaching with technology. Inductive qualitative analyses indicated that participants' technology use focused on presentation technologies such as the document camera or interactive whiteboard. Further, teachers' varied widely in their enacted pedagogies while integrating technology, and two participants demonstrated more frequent enactments of learner-centered pedagogies towards the end of the school year. Implications for researching teachers' use of technology in the future are also shared.

### **Examining the Influence of Elementary Mathematics Professional Development on Formative Assessment on Teachers**

Chuang Wang  
University of North Carolina at Charlotte  
Drew Polly  
University of North Carolina at Charlotte  
Richard G. Lambert  
University of North Carolina at Charlotte  
David K. Pugalee  
University of North Carolina at Charlotte  
Ashley Evans  
University of North Carolina at Charlotte

This report shares the impact of the first 32 hours of a professional development project on elementary school teachers (Grades 1 and 2) intended to prepare them to use a web-based formative mathematics assessment system with their students. An inductive analysis of survey data indicated that teachers constantly collect student to understand where each student stands in mathematics problem solving and use these data to drive their instruction. The professional development was helpful for teachers to improve their plan to collect student data and their use of student data. Most teachers were positive towards the use of AMC Anywhere technology introduced in the project.

**Buffet lunch: 11:35 – 12:15 p.m.**  
**Georgia**

**Business Meeting: 12:15 – 12:30 p.m.**  
**Georgia**

**Session C: General Session 12:45 a.m. – 1:30 p.m.**  
**Georgia**

### **General session: The Power of Education Research (Georgia)**

**Christopher I. Cobitz, Moderator**

How K-12 practitioners use research and what research may be useful to them  
Jennifer Cash  
Beth Bradley  
Mathew Hayes  
Jessica Jugan  
Sylvia White

**Session D: Poster Session 1:40 – 2:20 p.m.**  
**Georgia**

**Student Perceptions of LGBTQIA Acceptance at UNCW**

Josh Kinchen

University of North Carolina at Wilmington

As part of the Assessment and Evaluation course in the Master's of Higher Education program, this project was sponsored by the Office of Institutional Diversity and Inclusion (OIDI) to study students' perceptions of Lesbian, Gay, Bisexual, Transgender, Questioning, Intersex, and Ally (LGBTQIA) acceptance at the University of North Carolina Wilmington. Previous university-produced campus climate surveys had little information about LGBTQIA students. This was an opportunity to fill a knowledge gap and support the newly convened Chancellor's Committee tasked with reviewing OIDI's operations and structure. For the study, a survey was constructed and distributed to LGBTQIA undergraduate and graduate students. The results indicated the following areas were perceived as accepting: University College, Student Health Services, and Campus Life Buildings. The areas that needed attention in providing a more accepting experience included Fraternity and Sorority Life, the Athletics Department, and university recruitment materials. Recommendations were made to increase the current resources of LGBTQIA students, to both strengthen existing areas of merit and better serve areas that need improvement in creating an environment of inclusion and acceptance. Further study is needed to better understand the deeper information unseen by quantitative data, as well as, to gauge the longitudinal influence of this study.

**Demographic and Educational Attributes Associated with STEM and non-STEM College Majors among First Generation Students at UNC Charlotte**

Sandra L. Dika

University of North Carolina at Charlotte

Mark M. D'Amico

University of North Carolina at Charlotte

This exploratory study draws on college persistence and academic and career interest theories and focuses a growing nontraditional student population – those whose parents do not have a four-year degree – to investigate to what extent demographic characteristics and pre-entry educational attributes are associated with enrollment in STEM and non-STEM college majors. Among students in the sample (n=1,957), demographic characteristics were not associated with major, however, perceived preparation or confidence in chemistry was significant. These results suggest a need for better understanding of the enrollment and persistence process of first generation college students in STEM majors.

**Predicting Mathematics Achievement from Reading Proficiency in a group of 5th Graders in an Elementary School District in North Carolina.**

Cheryl Thomas

University of North Carolina at Greensboro

Competency in mathematics seems to be an area that presents a challenge for quite a number of students in the United States. This is according to the Trends in International Mathematics and Science Study

(TIMSS) results for eighth graders in the United States, who were ranked 15th among 46 participating countries around the world (TIMSS, 2003). More recently, the (PISA, 2013) reported stated that students in Grades 4, 8 and 12 in the United States were ranked lower than their counterparts in Asian countries in Math, Science and Reading. Previous research show that math word problem-solving performance and reading comprehension skills are both related to student's overall reasoning skills (Jiban & Deno, 2007). Although reading is a fundamental part of student's everyday life, not all students are able to read proficiently, and navigate their way through math worded problems, and students who are not strong readers, often do not perform proficiently in other content areas when given standardized tests (Alley,2011). This present study seeks to investigate the impact of student reading ability, in predicting their math achievement. Findings reveal that performance in math achievement can be predicted by students' reading ability. The results of the statistical analysis using linear regression and two-way ANOVA also support these findings of a relationship between math performance and reading proficiency.

### **Perceptions of Black and Latino Engineering Students' Interactions with Faculty and Other Institutional Agents**

Krystal Foxx

University of North Carolina at Charlotte

Although higher education institutions continue to increase access for all students and engage in diversity of both students and learning approaches, engineering as well as STEM programs struggle with graduating Black and Latino students. Through a qualitative research design, this research study explores Yosso's conceptual framework, Community Cultural Wealth (CCW) that aims to empower and place value on all cultures. The objectives of the proposed study, to be presented in the student poster showcase, will be to understand how Black and Latino engineering students may employ personal qualities and utilize their academic and social experiences to persist while in an engineering program; use interactions with engineering faculty, non-engineering faculty, advisors, and mentors/coaches to empower them throughout their studies; and understand how racial and cultural factors contribute to their role as engineering students.

### **Geographic Information Systems in Educational Evaluation and Research**

Christine Meyer

Winston-Salem/Forsyth County Schools

The purpose of this poster is to provide an overview of how to incorporate geographic information systems (GIS) into an applied educational evaluation and research setting. The target audience includes evaluators and researchers working with school districts or school-based programs who have limited or no GIS software experience. GIS consists of five major components: hardware, software, data, people, and methods (sometimes called procedures or applications). This poster will focus on the software and methods components, as well as provide a background about using GIS technology in educational evaluation and research. Software used includes two GIS programs. The first, ArcGIS, is a comprehensive, proprietary mapping program that is available only on a Windows platform. The second, Quantum GIS (QGIS), is a free and open-source mapping program that is cross-platform. Methods described will include, but are not limited to, geocoding, kernel density mapping, and buffering. Also included on the poster will be various resources available to those seeking to incorporate

GIS into their own work; resources will include multiple data sources available to the public and online material to aid in learning how to use GIS software and appropriate methods.

### **Using NAEP's Data Explorer (NDE) to Conduct Educational Research**

Emma M. Sunnassee

University of North Carolina at Greensboro

Shureka N. Hargrove

University of North Carolina at Greensboro

In light of this year's NCARE theme, "The Power of Education Research," this poster serves to present a somewhat obscure yet comprehensive research database and tool, namely the National Assessment of Educational Progress (NAEP) Data Explorer (NDE) (USDOE, 2013b). NAEP testing is conducted in grades 4, 8, and 12, and better known as the nation's report card and is referenced as the "gold standard" of testing (USDOE, 2013a). It can be inferred then, that the NDE database contains highly accurate and reliable information. NDE was constructed with simplicity in mind which makes it an ideal tool for students, parents, teachers, education professionals, and researchers alike. This poster will address three key components using NDE to facilitate research by the audience previously mentioned. First, the poster will discuss three avenues of exploration in NDE: Main NAEP, Long-Term Trend, High School Transcript Study. Next, the poster will discuss the data encompassed by NDE (i.e., criteria, variable) and the characteristics of each type. This serves as an educational piece to better understand the data infrastructure of NDE. Lastly, the poster will showcase an exemplar research question and display the four steps to exploring data on NDE, more specifically, selecting criteria, selecting variables, editing reports, and building reports. This last step will also reflect the data visualization features and statistical analyses of NDE. As can be gathered, this poster seeks to introduce curious individuals, researchers, and professionals alike to a comprehensive and straightforward educational research tool.

### **Examining the Impact of Leveled Literacy Intervention (LLI)\* on Literacy in Kindergarten**

Connie Lowman

NC A&T State University, Greensboro, NC

This research explores the impact on literacy in Kindergarten with the utilization of the Fountas and Pinnell Leveled Literacy Intervention (LLI) system. The Leveled Literacy Intervention system was created by Irene Fountas and Gay Su Pinnell as a short-term, supplementary intervention to help reduce the gap between current reading levels and expected reading levels of students in approximately 14-20 weeks. Through the use of specially designed leveled readers (A- lowest level to Z-highest level) and lesson plans, the lowest performing students are able to become more successful readers by combining reading, writing, phonics and word study in the lessons.

### **Evaluating a Spanish Basic Language Program at a Mid-Sized SE University**

Holli Bayonas

iEvaluate, LLC

Mariche G. Bayonas

University of North Carolina at Greensboro

The authors conducted a formal evaluation of the Basic Language Program in Spanish at a mid-sized public university. Informal evaluation of the program has taken place since the latest director assumed the position in Fall 2009, but within the contextual factors of the university, such as adhering to the

regional accreditation requirements, focusing on student learning outcomes, and the traditional program review process led by the university's Institutional Research office, and office of the Chancellor. The partnership between the Director and a professional evaluator allowed a more formal evaluation to take shape. The logic model, on which the formal evaluation of the Basic Language Program was based, incorporates the student learning outcomes (SLO) for each of the four courses within the program. The successful integration of the SLO into the logic model is a key aspect of the project. The logic model led to a process evaluation as opposed to an outcomes evaluation. Results have validated some of the Director's policies as well as illuminated some areas where more professional development is needed.

### **Bias Correction of the Weighted Maximum Likelihood Trait Estimator for the Rasch Model**

Nurliyana Bukhari

University of North Carolina at Greensboro

Allison Ames

University of North Carolina at Greensboro

For estimation in Item Response Theory (IRT), there are several limitations to the traditional maximum likelihood ability trait estimator, including biased estimates. This study's main objective is to provide recommendations about when the use of a weighted ability trait estimator may provide substantial improvement over the maximum likelihood ability trait estimator especially when tests are not conventionally centered at 0. The simulation results provided will guide practitioners in their choice of a latent trait estimator in instances in which the test difficulty is not a match with examinee ability distributions.

### **How Can Diagnostic Measurement Provide Valid Classroom Formative Assessment for Achieving College and Career Readiness? A Validity Inquiry**

Thomas P. McCoy

Department of Educational Research Methodology, University of North Carolina at Greensboro

Micheline Chalhoub-Deville

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Funding from the Race to the Top program is focused on high school graduating students being college and career ready (CACR) through alignment of instruction and assessment through the Common Core State Standards Initiative (Camara, 2014). The two primary funded consortia, PARCC and SBAC, underline the role of formative assessment (FA) for enhancing learning to increase student achievement. This showcase will explore how diagnostic measurement (DM) principles and applications (Rupp, Templin, & Henson, 2010) can be used for classroom FA using recent methodological advancements (Shu, Henson, & Willse, 2013; Chiu & Douglas, 2013) within an argument-based validity framework (Kane, 2006; Kane, 2013) for CACR attainment. The showcase will primarily be concerned with addressing the question: "How can DM provide valid classroom FA for achieving student CACR?"

First, common diagnostic measurement features will be explicated. Second, an interpretive argument will be described according to several hypothesized claims generated from an ultimate goal of CACR. A literature review of validity and DM will inform the interpretive argument. Sources of evidence from The Standards for Educational and Psychological Testing (AERA, APA, NCME, 1999) will be discussed. Proposed studies will then be described to evaluate the merit of the hypothesized claims. For example, an early-on study will assess how the construct under study (e.g., English Language Arts) can be appropriately represented and decomposed into skills for diagnostic assessment in terms of their

number and definitional grain size for the intended purpose. Limitations and future directions will be detailed.

### **Parent and Teacher Opinions of Eight Different Ways of Thinking and Learning**

George Maycock, Ed.D.  
Appalachian State University  
Alvin Proffit  
Appalachian State University

Parents and teachers from seven elementary schools were surveyed to determine their opinions of the relative importance of Howard Gardner's eight ways of thinking and learning. Parents and teachers were consistent in rating the four areas of logical-mathematical, intrapersonal, linguistic and interpersonal as most important for children's learning. Detailed results of the survey will be shown in graphs and charts on the poster presentation.

### **Application of Assessment Engineering (AE) to the Common Core State Standards for 2nd Grade Reading**

Kshawna Askew  
University of North Carolina at Greensboro  
Shureka Hargrove  
University of North Carolina at Greensboro

Assessment Engineering (AE) is a contemporary framework for designing and implementing assessments by (i) defining constructs; (ii) developing item models; (iii) assembling automated tests; and (4) applying psychometric models to item responses. In lieu of this year's NCARE theme, "The Power of Education Research," this poster will discuss and demonstrate the first two stages of AE: defining constructs and developing item models. More specifically, the Common Core State Standards for 2nd Grade Reading will be used to demonstrate an example of the power of AE in developing reliable, reproducible, and cost efficient items.

The purpose of this poster is to discuss the potential of AE for incorporating the Common Core State Standards (CCSS) into classroom assessments, specifically in Reading for 2nd Grade. The CCSS are a new education initiative, in select states, that provides details about what students in grades K-12 should know at the end of each academic year, in the areas of Math and Reading (National Governors Association, 2010). Research on AE as an alternative method to the more traditional test specifications is currently being conducted, and the goal of this poster is to demonstrate the potential of AE.

### **An Evaluation of the Delta Chi Wilmington Chapter's Senior Status Program**

Jordan Stone  
University of North Carolina at Wilmington

The Delta Chi Fraternity Wilmington Chapter created a Senior Status Program to improve retention of senior members of the organization as well as promote a role of model leadership. This evaluation examines the impact of the program on both the recipients as well as the potential recipients that the program is meant to inspire and motivate. This qualitative assessment allowed members of the organization to examine the effectiveness their own program as well as be an integral part in discovering ways to improve the program to better meet their needs.

## **The Relationship Between LEGO Education's StoryStarter and Written Creativity**

Mary Walser

Davidson County Schools

The ability to engage in systematic creativity occurs when one's curiosity connects to playfulness and learners are provided with the ability to ask questions and imagine what could be. Mental readiness is necessary for learners to be focused and committed to the task. Confidence impacts learners' ability to take risks and grow from successes and failures. Positive framing is essential for learners to determine the worth and value of the task so the pursuit to finish can be carried out. Lastly, commitment is the perseverance to elaborate positive vision.

In the beginning of the 2013-2014 school year, the researcher utilized two different sources of data to explore the impact of StoryStarter from LEGO Education on the written creativity and enthusiasm of seventeen 4th grade students. The data sources used included pre/post surveys and the written stories.

<b>Session E: 2:30 – 3:35 p.m.</b>
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### **6. Secondary Education Related Studies (Triad East)**

**David Sutton, Moderator**

#### **Who Stays and Who Goes? A Longitudinal Study of Local Context in Dropping Out of School**

Marty Ward

Winston-Salem/Forsyth County Schools

Jonathan Rollins

University of North Carolina at Greensboro

Judy Penny

Winston-Salem/Forsyth County Schools

A large school district in the southeastern United States is investigating risk factors for students in danger of dropping out of school. Although there are well-known risk factors from national research, it is clear that it is important to investigate risk factors using data specific to each locale, in order to calibrate an early warning tracking system and target interventions.

The questions we will explore include the following.

1. Are there identifiable subgroups of students with differentiated patterns of risk factors, or those who drop out earlier (before grade 10), and later?
2. Which Grade 8 factors predict Grade 9 “on track” status?
3. Which Grade 9 factors predict subsequent “on track” status?
4. Can dropout behavior be predicted in later grades?
5. To what extent do individual and combinations of risk factors predict dropping out versus staying in school or graduating?
6. Which schools, considering risk factors, do better or worse in terms of graduating students?

The researchers are in the process of studying students who graduated, and those who did not, among the earliest cohort of students for whom we have sufficient longitudinal data, which is the entering eighth grade class of 2007-08. Data on these students were tracked for five years, through the 2011-12 school year, when “on time” graduation would have occurred. We will determine which grade 8 variables predict “on track” status in grade 9, and which grade 9 variables are predictive of later graduation status.

## **Considering district and school factors and their relationship to ACT performance in North Carolina: An examination of the ACT pilot results**

Theodore Kaniuka

Fayetteville State University

Since 2001 several states have adopted the requirement that high school students either take the SAT or ACT to assess high school programs or assist students in accessing post secondary educational opportunities. In 2002, the early college high school program was started to serve traditionally underserved youth and increase post secondary opportunities for these student. In 2012 the state of North Carolina adopted a new accountability program that includes the ACT as a measure of college readiness. Previous research on the relationship between school districts and school level performance found that district size had a role in school achievement. This study looked at how district and school factors influenced the ACT performance of students across North Carolina in an effort to better understand if there were district factors other than size that may be influencing student performance and if the early college reform model given the influence of district factors is meeting the goal of increasing student college readiness. The results of this study are 1) district factors are related to school level performance, where student race and parental education levels were found to be significant predictors of achievement, 2) the traditional school level factors of race and student socio-economic status did significantly predict ACT scores, and 3) students attending early college high schools did score higher on the ACT as compared to traditional high schools.

## **Effect of Mathematics Methods Instruction on the Attitudes and Beliefs of Pre-service Elementary School Teachers**

Janet S. Jenkins

Wingate University

It is commonly recognized that teachers will teach the way they were taught unless there is an intervention that provides them with reasons to change and access to alternative instructional strategies. The concern is that pre-service elementary school teachers who did not experience effective mathematics instruction when they were elementary students will not be prepared to provide their future students with high quality mathematics instruction. This study examined the effect of taking a mathematics methods class on the attitudes and beliefs of pre-service elementary school teachers about their ability to provide more effective elementary school mathematics instruction than they received as children. The study used a pre-test/post-test design to measure changes from the beginning of the course until the end. Data were gathered over a two-year period using a researcher-designed survey. Findings indicated that there was a statistically significant positive change as a result of participating in the class unless students indicated a high level of agreement with an item at the beginning of the course.

## **7. Educator Preparation Related Studies (Triad West)**

**Leslie R. Zenk, Moderator**

### **An Examination of the Leadership competencies of Doctoral Students: A Mixed-Method Analysis**

Comfort Okpala

North Carolina A & T State University

Myron White

North Carolina A & T State University

This study focused on the leadership competencies of doctoral students. The major goals of the study was 1) to examine the leadership competencies of doctoral students through the eyes of faculty, 2) to

examine the leadership competencies of doctoral students through the eyes of graduates, 3) to examine the leadership competencies of doctoral students through the eyes of current doctoral students, and 4) to determine whether differences exist between male and female participants in the identification of leadership competencies of doctoral students. The findings from a simple regression analysis show that gender was strongly related to the identification of leadership competencies with females indicating relationship-oriented and men indicating task-oriented. There are some notable differences between faculty, graduates, and students. The results from the qualitative analysis show that female participants focused more on the description of moral/ethical leadership while men focused more on visionary leadership.

### **Are We Measuring What We Think We Are Measuring? Examining Validity of Two Teacher Candidate Performance Assessment Rubrics**

Jennifer R. McGee

Appalachian State University

Amanda B. Werts

Appalachian State University

Assessing teacher candidate performance is required not only by accreditation bodies, such as CAEP (Council for the Accreditation of Educator Preparation), but also by the North Carolina Department of Public Instruction (NCDPI) for teacher licensure. The focus of this study is NCDPI Electronic Evidence 3, which requires teacher candidates to show, “Pedagogical and Professional Knowledge Skills and Dispositions” (NCDPI Undergraduate Teaching Blueprint Guidelines., 2011 p. 2). At the researchers’ institution, NCDPI Electronic Evidence 3 is called the “Instructional Design Project” (IDP). The purpose of this study was to examine the validity of the IDP rubric. A larger, longitudinal study is being planned to examine other aspects of the IDP coupled with another similar assessment and including implementation fidelity, communication, and assessment components. Results of this study will aid in planning the longitudinal study. The following research questions guided this study:

1. What is the reliability of both IDP rubric?
2. What evidence of validity exists for the IDP rubric?

### **The Relationships Between Self-efficacy for Teaching Mathematics and Mathematics Knowledge for Teaching**

Jennifer R. McGee

Appalachian State University

This study examines the relationships between self-efficacy for teaching mathematics and mathematics knowledge for teaching. Data for this study comes from an intensive professional development program that was funded by a Mathematics Science Partnership (MSP) grant. The MSP grant took place over three academic years from 2009 to 2012 and was collaborative partnership between two school districts and an urban research university in the southeastern region of the United States. Both cohorts of teacher participants completed these instruments as a pre-test in August and as a post-test in February during their respective year of participation in the MSP grant. Preliminary analyses of the data had some interesting results. There is a statistically significant relationship between self-efficacy for teaching mathematics and mathematics knowledge for teaching on the post-test, but not on the pre-test. Other differences are examined with regard to grade level and school district. Results have some implications for the success of professional development aimed to increase both self-efficacy and content knowledge and for the interactions between these two factors.

## **8. Assessment and Technology of Research Related Studies (Triad Central)**

**Christopher I. Cobitz, Moderator**

### **Using SAS PROC MCMC for Markov Chain Monte Carlo Methods: Application to Item Response Theory Models**

Allison J. Ames

University of North Carolina at Greensboro

Kelli M. Samonte

University of North Carolina at Greensboro

Interest in using Bayesian methods for estimating item response theory (IRT) models has grown at a remarkable rate in recent years. This interest in Bayesian estimation inspired a growth in available software such as SAS PROC MCMC, WinBUGS, and R packages. This paper intends to provide an accessible overview of Bayesian methods in the context of IRT to serve as a useful guide for practitioners in estimating and interpreting IRT models. Included are an overview of IRT in the Bayesian paradigm, an illustration of the use of SAS PROC MCMC for estimation, and annotated output from the procedure. Code will be provided for estimation of both dichotomous and polytomous IRT models as well as some more complex models used in psychometrics.

### **Evaluating the Interface of Health and Education: Applications of Geospatial Analysis to County-Level National Data**

David Hollar

Pfeiffer University

The objective of this research was to spatially analyze linked health and education data for geographic trends in factors impacting children's health.

Perspective: As an extension of the assumptions for OLS regression analysis, the study of spatially-related county-level data tends to inflate R<sup>2</sup>. Spatial regression represents a robust approach for improved analysis of geographic data.

Methods: The researcher used GeoDa 1.4.1 to regress county-level child health outcomes on the independent variables percent literacy, disability, insurability, poverty, healthcare, race, and gender. Statistics included spatial R<sup>2</sup>, Moran's I, and measures of multicollinearity.

Data: Data sources included the 2013 National County Health Rankings and the 2012 Social Security Administration's Report on SSDI Beneficiaries, both for n = 3,221 county units for the entire US and territories.

Results and Conclusions: The principal model of factors impacting child mortality yielded an adjusted R<sup>2</sup> = 0.95 (F = 11613, p < .001) with low multicollinearity. Variables with significant beta coefficients included counties with low literacy, higher mental health provision, uninsured children, and high disability rates. The results demonstrate correlations between county-level conditions and child health outcomes, supporting previous research linking poor health/education, and low socioeconomic conditions. Geospatial information can assist policymakers to apply health education interventions.

### **Evaluability Assessment of a Professional Development System Partnership: Method, Results, and Implications**

Tamara M. Walser

University of North Carolina Wilmington

The purpose of this presentation is to share the process and results of an evaluability assessment (EA) of a professional development system (PDS) partnership between a college of education and 12 regional

school districts. Key outcomes of the EA included: (a) a program theory model of the PDS; (b) findings about the alignment of PDS program theory with PDS reality—i.e., perceptions of the PDS and its implementation; (c) related findings about the plausibility of the PDS yielding positive results as currently conceived and implemented; and (d) recommendations to increase evaluability and for further evaluation. An EA work group of key PDS personnel collaborated with the evaluator to conduct the EA. Data collection included document and literature review, focus groups with PDS partnership teachers and college of education faculty, interviews with key PDS personnel, and a survey of PDS district and school administrators. The presentation will include background on EA; the EA process and results; and implications.

**3:35 p.m. – Annual meeting adjourns**

*See you next year!*

**3:45 – 4:30 p.m. Board Meeting (Triad East)**

*Thank you for participating in NCARE 2014! See you on...*



## **Upcoming NCARE Opportunities**

### **New Journal Collaboration**

The Center for Educational Measurement and Evaluation (CEME) at the University of North Carolina at Charlotte (UNC Charlotte) is launching a new journal - Journal of Applied Educational and Policy Research (JAEPR) through UNC Charlotte's Digital Scholarship in Atkins Library (<http://journals.uncc.edu>).

JAEPR will offer an annual Special Issue of the NCARE conference papers beginning in 2014-2015. Acceptance of papers for conference presentation by NCARE does not guarantee publication by JAEPR; all papers for JAEPR consideration must be submitted by the advertised deadline and will undergo a rigorous peer review. If enough papers are not accepted to warrant a special issue, non-NCARE papers will be included in the edition.

NCARE conference presenters will be invited to submit full articles for publication consideration in Spring 2014. Detailed information of the journal and the call for papers will be announced to the NCARE membership and will be found on NCARE's web page (<http://ncare.us>).

### **NCARE Distinguished Paper Award & Marvin Wyne Outstanding Student Paper Award**

Please consider submitting your paper for either the Distinguished Paper Award or the Marvin Wyne Outstanding Student Paper Award. The winner of the Distinguished Paper Award will earn a slot to present his or her paper on the 2015 AERA meeting program and receive \$500 toward travel to the 2015 AERA meeting). The winner of the Marvin Wyne Outstanding Student Paper Award will receive a \$100 award.

For both awards:

- The paper must have been presented at the 2014 annual meeting but not previously presented or published elsewhere.
- Papers representing various forms and genres of research (including conceptual papers) will be welcome.
- The paper submitted for consideration must be no longer than the equivalent of 30 double-spaced pages with standard APA margins and 10- to 12- point type. The 30-page limit includes all tables, appendices, charts, graphs, references and other ancillaries to the text. The name, address, and phone number of the first author should appear on a detachable cover page. No author identifying references should appear elsewhere. A 100- to 150-word abstract should be included with the paper.

Any person who is a member of NCARE at the time of the annual meeting may submit a paper for consideration for the Distinguished Paper Award.

Students may apply for the Marvin Wyne Outstanding Student Paper Award or for the Distinguished Paper Award but not both (simultaneously). For consideration for the Marvin Wyne Outstanding Student Paper Award, a student or students must have wholly written the paper. The student(s) must be a member of NCARE at the time of the annual meeting.

The submission deadline for both awards is **April 15, 2014**. Papers may be submitted electronically to the board members named below.

*Distinguished Paper Award:* Tamara Walser: [walsert@uncw.edu](mailto:walsert@uncw.edu)

*Marvin Wyne Outstanding Student Paper Award:* David Sutton, [dsutton@rcsnc.org](mailto:dsutton@rcsnc.org)

### **NCARE in 2014-2015**

Watch for the Fall 2014 newsletter, which will contain information about the 2015 annual meeting and the call for nominations for the 2015 NCARE board election.