Welcome to the 2017 RMAIR Conference

Discovering an Oasis in the Desert of Data

Embassy Suites by Hilton Scottsdale Resort
5001 N Scottsdale Road, Scottsdale Arizona

Sponsored by:

Equifax

University Analytics & Institutional Research

Scantron

Pima Community College
Institutional Research, Planning & Effectiveness
### 2017 Schedule at a Glance

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<th>Room</th>
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<td>9:00 – 5:00</td>
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PARKING
Nearby Restaurants for Lunch Breaks

1. **Granada Grill** (On the Property) Located on the top floor of the Embassy Suites Resort. Granada Bar and Grill is an urban American concept with a comfortable but contemporary environment.  

2. **The Scott Grill** (0.3 miles) - The FireSky Resort & Spa's stylish eatery & lounge serves contemporary, market-driven Italian fare.  

3. **Postino Highland** (0.4 miles) – Italian Fare, Bruschetta Boards, Wine Bar  

4. **Modern Market Eatery** (0.4 miles) - Salad, Breakfast & Brunch, Sandwiches  

5. **City Market Deli** - (0.2 miles) cafe specializing in sandwiches, burgers, salads & coffee.  
   [http://www.citymarketdeli.com](http://www.citymarketdeli.com)
Keynote Address

Thursday, October 5th, 2017 at 8:30AM
Kiva Conference Room

Dr. Mark David Milliron is an award-winning leader, author, speaker, and consultant, who works with universities, community colleges, K-12 schools, foundations, corporations, associations, and government agencies across the country and around the world. He is Co-Founder and Chief Learning Officer of Civitas Learning, a social-purpose corporation committed to using the best of data science and design thinking to help students learn well and finish strong on education pathways. Mark also serves as Executive Director of the Next-Generation Leadership Academy.

In previous roles, Mark served as the Deputy Director for Postsecondary Success with the Bill & Melinda Gates Foundation; founding Chancellor of WGU Texas; Endowed Fellow and Director of the National Institute of Staff and Organizational Development at The University of Texas at Austin; Vice President for Education and Medical Practice with SAS; and President and CEO of the League for Innovation in the Community College.

He is a member of numerous boards and advisory groups, including the Society for College and University Planning (SCUP), the Global Online Academy, and the Institute for the Study of Knowledge Management in Education (ISKME), the parent organization of OER Commons. Past board service includes the American Council on Education (ACE), Western Governors University (WGU), and the National Technical Institute for the Deaf.

In 1999, The University of Texas at Austin’s College of Education named Mark a Distinguished Graduate for his service to the education field. In 2007, the American Association of Community Colleges (AACC) presented him with its prestigious National Leadership Award. In 2013 he was inducted into the United States Distance Learning Association’s (USDLA) Hall of Fame. And in 2016 he was chosen by the Chronicle of Higher Education as one of the “Top Technology Innovators” in higher education.

Regardless of all of his activities and accomplishments, he will quickly tell you that the most important job and the greatest blessing in his life is serving as Julia’s husband, and as father to Alexandra, Richard, Marcus, and Max.
Pre-Conference Workshop Overviews

Tuesday Workshops

**IPEDS New Keyholder Training**
This workshop provides essential beginner-level training and a thorough introduction to the IPEDS data collection cycle and reporting requirements. Workshop topics outline keyholders’ roles and responsibilities and highlight the resources available to assist in the IPEDS planning and reporting processes. Participants are given the opportunity to create an IPEDS planning calendar for the upcoming data collection cycle. Additionally, this workshop serves as a valuable professional networking opportunity for institutional researchers in their new roles.

**IPEDS Best Practices Training**
This recently redesigned workshop provides intermediate-level keyholder training, and is specifically designed for individuals who have led IPEDS data submissions at their institutions for at least one full reporting cycle. It features best practices in IR, as well as technical efficiencies in data management through Excel and in review and submission of IPEDS survey data. The workshop expands on the use of IPEDS data for benchmarking to address key institutional questions and needs. Participants should have experience with the “Use the Data” section of the NCES website, and a working knowledge of Excel.

Wednesday Morning Workshops

**IPEDS Data as the Public Face of an Institution**
This workshop stresses the importance of accuracy and consistency in data reported to IPEDS. Examples of real IPEDS data used in the public domain are incorporated, enabling participants to understand the role of governmental and non-governmental entities in IPEDS reporting. The workshop includes presentations, discussions, exercises, and demonstrations.

**TABLEAU Bootcamp (Mark Leany & Tim Stanley, Utah Valley University)**
Tableau is a readily available data visualization tool that has become increasingly popular over the last few years. This workshop consists of hands-on experience in using Tableau to build attractive, interactive data visualizations. By the end of the workshop, participants will have created interactive visualizations using example files and have the confidence to begin using Tableau to enhance their own reporting. This workshop has been taught (at multiple venues) since 2015, and constantly revised to make it better each time (including keeping it updated to Tableau version 10.2).
Participants in this workshop will:
- Build interactive data visualizations starting from example files using Tableau;
- Develop a conceptual understanding of how to use filters, calculated fields, basic parameters, and various other Tableau features;
- Gain experience combining multiple elements into a single dashboard; and
- Develop the confidence to use Tableau to enhance their own reporting.

**Excel Dashboards on the Fly (Ozlem Kacira, Pima Community College)**
In this workshop, participants will learn how to build dynamic Excel dashboards using sample student data. Specifically, participants will learn how to:
- Connect data from different sources
**RMAIR**

Rocky Mountain Association for Institutional Research

- Create, format and refresh pivot tables and charts
- Add slicers and connect them to the tables and charts
- Update the dashboard with new data
- Lock Excel dashboards

**Wednesday Afternoon Workshops**

**IPEDS Data and Benchmarking**

This workshop introduces the fundamentals of benchmarking as a measure of institutional effectiveness. It is designed for individuals with little to no experience in benchmarking studies. Participants use data from the IPEDS Surveys, Data Feedback Reports, and the “Use the Data” section of the NCES website to learn about the types of comparison groups that can be constructed. Exercises demonstrate establishment of key performance indicators (KPIs) and identification of variables to refine comparison groups.

**TABLEAU Advanced Topics (Rebecca Barber, Arizona State University)**

Tableau allows even a new user to create impressive and useful dashboards. But underlying the more straight-forward tasks is a powerful engine that allows for more complex calculations, advanced visualizations and comprehensive dashboards. This workshop will deal with some of the more advanced concepts in Tableau, including hands-on experience building relevant calculations and dashboards. Participants in this workshop will:

- Understand and practice advanced techniques, including Table Calculations, Level of Detail Expressions, and Groups and Sets
- Gain experience with time-series data in Tableau
- Practice advanced data preparation techniques necessary to support complex analysis

**Introduction to Power BI to Visualize Data and Create Dashboards (Mark Perkins, Laramie County Community College)**

Research offices are often required to submit several reports to their institutions. These reports often necessitate the use of Excel, SPSS, R, and other tools to visualize the data. Power BI gives research offices the ability to create interactive dashboards that allow users to apply several filters for drilling down and customizing their reports with striking visualizations. These dashboards have the potential to decrease workload and paper use while making the data experience more empowering, interactive, informative, and aesthetic for the user.

This session will introduce participants to the basics of Power BI including:

- Uploading different kinds of data from programs such as Excel;
- Preparing and structuring data for use on Power BI;
- Connecting several tabs or spreadsheets to use with one Power BI platform; and
- Using the uploaded data to create different interactive visualizations including, among others, bar graphs, charts, choropleths, and tables.

**AIR Listening Session (Gina Johnson) – OPEN INVITATION TO ALL ATTENDEES**

The Association for Institutional Research (AIR) wants to hear your thoughts on the future of institutional research and the associated needs of the profession. Please join Gina Johnson, Assistant Executive Director for Partnerships & Membership at AIR from 5:00-5:45 pm on Wednesday, October 4th in Kiva I/II for an engaging discussion.
Concurrent Session Overviews

Thursday Morning Concurrent Sessions

Relentlessly Future Focused: Predictive Analytics in the University of Arizona Student Success Initiative (Angela Baldasare, University of Arizona)
Join us to hear about the University of Arizona’s experience in combining in-house analytics and data support with predictive analytics from a third-party vendor to meet the ever-increasing demand for data on student risk and success. Learn about the challenges and successes in this effort, the types of data produced, how University Analytics and Institutional Research (UAIR) has collaboratively interpreted the information with campus stakeholders, and how the data was used to improve student retention.

IPEDS Cohort Exclusions: The Impact of the "Mission Factor" (Erika Hill & Ben White, University of Utah)
The Rocky Mountain region is disproportionately impacted by allowable cohort exclusions due to the proportion of students who leave for religious missions. In October 2012, the Church of Jesus Christ of Latter-day Saints implemented a policy change and Utah schools witnessed 30.5% of the freshmen cohort excluded from the subsequent retention calculation. Utilizing data from the IPEDS surveys, the presenters will discuss findings, trends, and implications related to these allowable exclusions.

Grants: The Hidden Oases in the Higher Education Resource Desert (Tim Stanley & Janis Raje, Utah Valley University)
In the “resource desert” of higher education, institutions have become increasingly reliant on grants as part of their revenue. Institutional research can play a critical role in helping institutions find these oases. IR can contribute in two important ways: (1) Helping identify data documenting the need for a grant, and (2) helping design the outcomes assessment of the grant. This presentation discusses ways to enhance this partnership and orients institutional researchers to the grant process.

Does Summer Enrollment Improve College Success for Fall-Entry High School Graduates? (Serge Herzog, University of Nevada, Reno)
To estimate the effect of summer term enrollment on college success of fall-entry new freshmen, this study compares first-year academic outcomes of matched-sample students over a 6-year period. The study takes advantage of several matching algorithms to address selection bias in the statistical estimator and gauges the summer enrollment effect net of pre-college, financial aid, college experience, and student motivation covariates. The findings inform the theoretical models on student success advanced by Astin (1993, 1984), Pascarella and Terenzini (2005), and Braxton (2000).

Thursday Afternoon Concurrent Sessions

Prix Fixe to Buffet: Beyond the Standard Dashboard (Ben White & Erika Hill, University of Utah)
Dashboards have been a buzzword in Institutional Research for the past few years but what happens after you have the tools, the know-how, and a list of automated dashboards? The University of Utah has expanded beyond public dashboards to use Tableau for requests (e.g. ad hoc, internal), data quality (i.e. error scripts), and more. Come join us as we provide examples and discuss the creative ways we’ve used Tableau to improve data quality and dissemination.
We Have Data, But What Do We Know About Students? (Mary Beth Worley, Dona Ana Community College)

A recent visitor to Dona Ana Community College stumped our administrators when he asked the question “What are the five sticking points that keep your students from succeeding?” In response to this question, DACC developed and published the ”Data Strategy Framework: Guidelines and Procedures”. A living document that communicates our college's philosophy of data usage, and to build data literacy on our campus by engaging faculty, staff, and students in collaborative inquiry about student success.

The Power of Tableau Parameters and Level of Detail Calculations (Sandip Thanki & Mick Haney, Nevada State College)

Sharing a large amount of data through Tableau dashboards can ease the burden of ad hoc reporting, but the usability can suffer as more filters are added. In this technical session, the attendees will be presented with examples of how Parameters and Level of Detail calculations can be incorporated in dashboards to preserve simplicity and yet have the ability to present a large amount of data.

Practical Application of the Duties & Functions of Institutional Research (Gina Johnson, AIR, Mike Furno, University of Denver, & Dawn Kenney, Central New Mexico Community College)

The recently developed Duties and Functions of Institutional Research clearly and concisely identifies the areas necessary for an effective institutional research function in an institution, system, or organization. Defining these core functions further professionalizes the field and allows practitioners of IR to highlight their value within their organizational structure. This session will explore the Duties & Functions of Institutional Research and provide ways to practically apply them in higher education.

Varying Effects of Types of Early-College Coursework on Student Outcomes (Lawrence Redlinger, Sharon Etheredge, & Andrea Stigdon, University of Texas at Dallas)

The purpose of this session is to examine the effects of various advanced course offerings --AP, IB, and Dual Credit Programs-- on student outcomes. While research has indicated students who took college-level-dual-credit courses outperform peers who do not take any with respect to postsecondary outcomes, few studies compare the relative efficacy of college-level-dual-credit courses to Advanced Placement or International Baccalaureate courses as college readiness strategies.

Beyond Descriptive Statistics: Aspirations of Rural IR offices (Mary Schaaf, Arizona Western College, Tom Hughes, Yavapai College, & Glen Snider, Eastern Arizona College)

Rural community college IR leaders will guide discussion of the evolving role of IR and strategies to move our focus toward transformative information. Attendees will (1) develop context to compare their priorities to their peers; (2) understand IR trends impacting rural IR teams; (3) select strategies to heighten institutional effectiveness; and (4) identify key deliverables.

A summary will be generated and distributed to participants who provide email addresses.

Friday Morning Concurrent Sessions

Does Diversity Promote Student Success and Retention? (Serge Herzog, University of Nevada, Reno)

To estimate the effect of the classroom diversity on academic outcomes and enrollment persistence, this study uses direct measures of classroom ethnic/racial composition that are based on institutional matriculation records at a public research university. Estimated effects are based on annual longitudinal changes in classroom diversity exposure after tracking several freshmen cohorts over a 3-year period. The study is conceptually anchored in the Input-environment-output (I-E-O) model (Astin, 1993; Pascarella & Terenzini, 2005), with classroom diversity as the focal environment factor net of precollege, “bridge” (e.g., financial aid), college experience, and student motivation covariates.
Setting Students Up for Success with Less Financial Stress (Sponsor Session: Equifax)
The amount of debt that many students rack up by the time they graduate can leave them with an uphill financial battle before they begin their career. Learn how institutions are leveraging Financial Wellness tools to better prepare students for the working world along with Graduate Outcome metrics to measure/track students’ income and financial health as they progress through their careers. Hear how this insight can be gained by looking at graduates over time by GPA, program, campus, and more!

Quantifying the Unmet Need of Undergraduate Students (Joseph Curtin, Utah System of Higher Education)
Student debt and the cost of attending college continue to be a focus area for many higher education leaders. Finances are one barrier for student college completion. To help understand the financial burden on students, this study examines how students pay for their basic annual tuition and fees. The study uses Utah public student enrollment, financial aid, and tuition and fees data to measure the amount of financial need that is not covered through either grant aid or student loans.

ASU Online Data Driven Retention and Coaching Tools (Bill Killacky, Ryan Chase & Nancy Cervasio, Arizona State University)
Arizona State University’s EdPlus Student Success Center for online students will present data-driven retention and coaching tools. The goal is to surface actionable student data alerts to success coaches, enable targeted outreach campaigns, display real-time dashboard of measures of retention by responsible parties, and provide student lists for informed outreach to help keep students on track.

We're Going to Have How Many Students? (Nicola Richmond, Pima Community College)
With the development of a data warehouse and associated interactive reports, Pima Community College is shifting its attention to the world of data analytics and applying modeling methods to improve our understanding of priority college topics. In this session, I will share research results on the development of a model to project enrollment, leveraging diverse pockets of college and community data to provide meaningful estimates to support college planning and operations.

How to Win Program Review & Influence Department Chairs (Lacey Hall, Utah Valley University)
Academic Program Review is a standard practice for colleges and universities, which often requires heavy support from Institutional Research. Drawing on lessons we have learned from providing Program Review data to departments across campus, we will share some ideas for designing and implementing Tableau dashboards to make that data more accessible to your audience.

Please join us for lunch and the RMAIR Business Meeting:
Friday, October 6th at 11:30
Session to Session Retention for Online Learners: Weight of Evidence (Lorie Twist, Arizona State University)

At ASU EdPlus, online courses are offered at six start dates per year, therefore tracking retention of students comes down to the session. Building out the dependent variable is tricky. Once defined, predicting a student’s retention is conducted using the typical logistic regression, with a twist. Weight of Evidence transformations are applied to the variables allowing both continuous and categorical information to be examined in the model, a useful insight into Institutional Research.

Student Onboarding and Retention (John Whitney, Utah Valley University)

All new and transfer students for Fall 2016 and Spring 2017 were surveyed and asked to identify and rank the biggest issues they experienced during onboarding. This study examines whether the experiences students have during the onboarding process affects retention one year later.

Analyzing the Data: Dual Credit Articulation to Degree Plans (Tracey Holley & Don Beach, Tarleton State University)

The body of research is limited concerning the impact that dual credit hours have for students once they leave the high school environment and enroll at 4-year universities. Specifically, there is limited data on the articulation of dual credit to student degree plans at the postsecondary level. This research presentation describes the results of an analysis of articulation patterns of dual credit courses to student degree plans in a public Texas institution of higher education.

Go “New School” with Grad Data

Ditch the old-school way of collecting data. Proving the value of your institution and programs with up-to-date data and insights — quickly — is crucial.

Visit the Equifax Booth to Learn More!