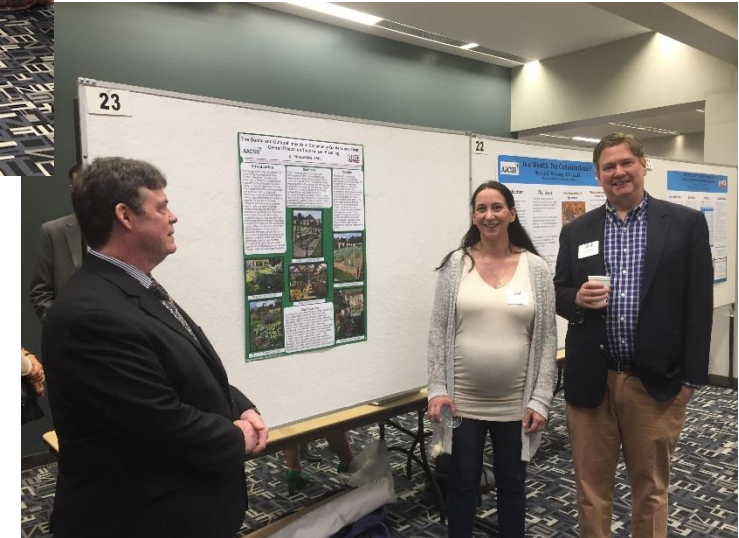
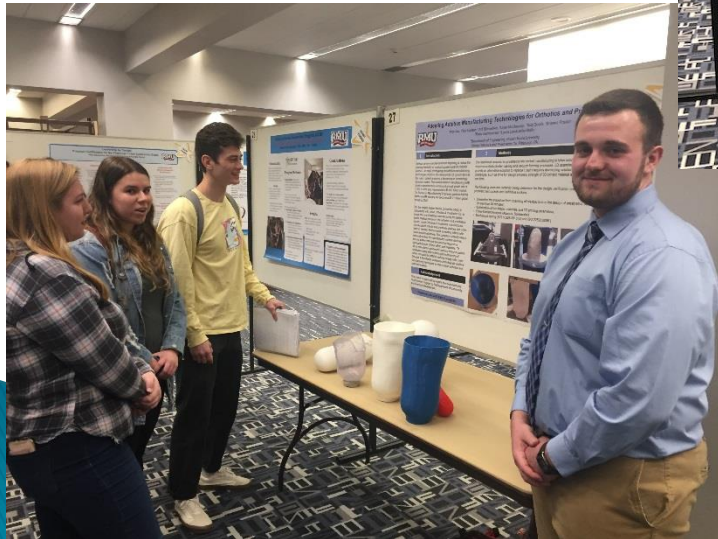
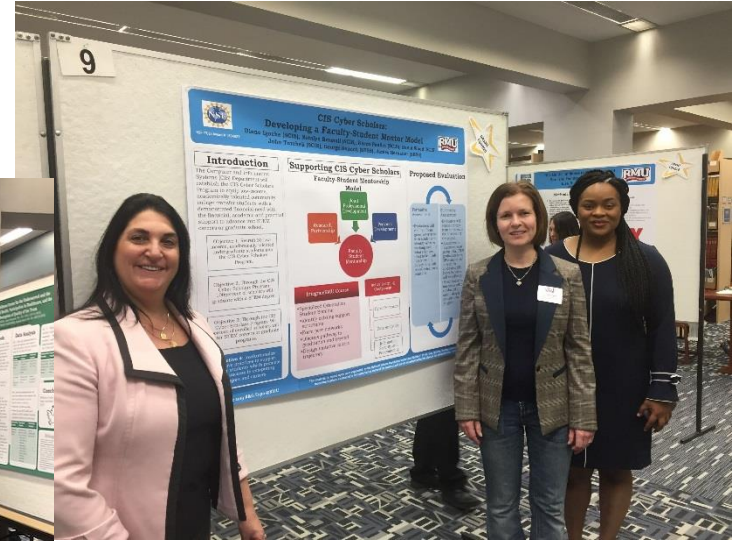
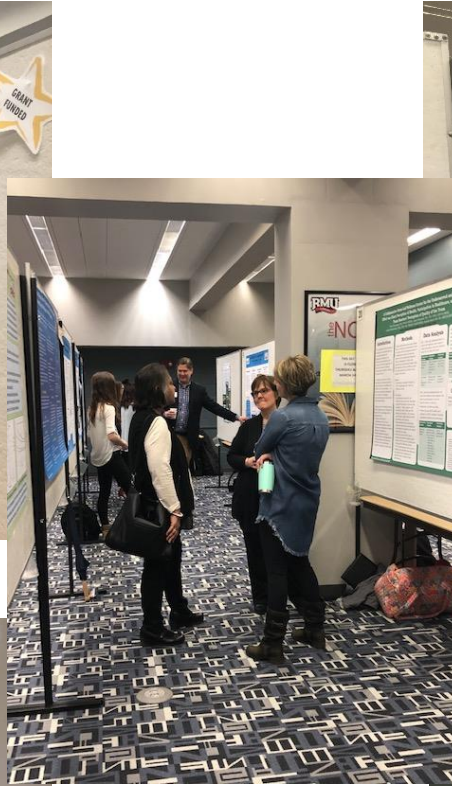
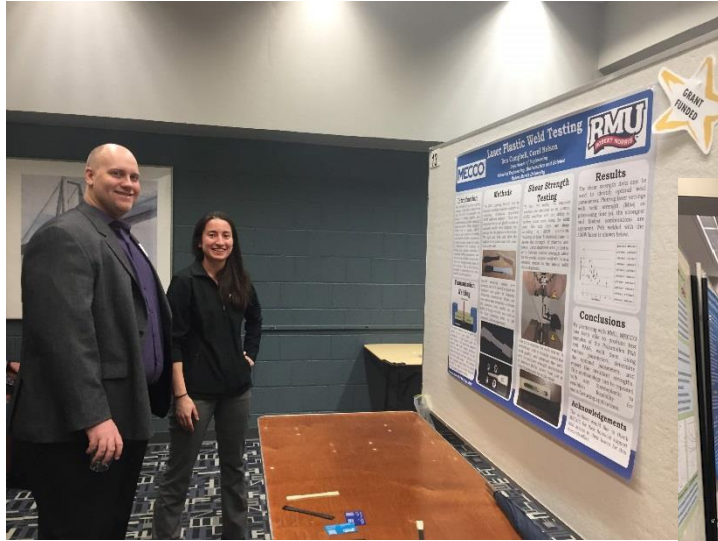




**Research & Grants Expo
2019**

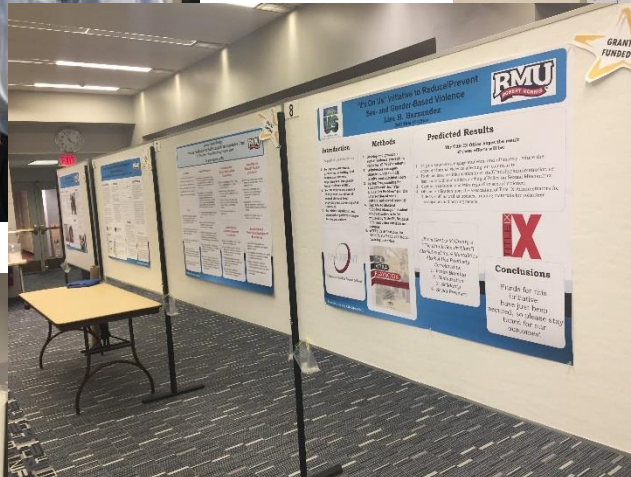
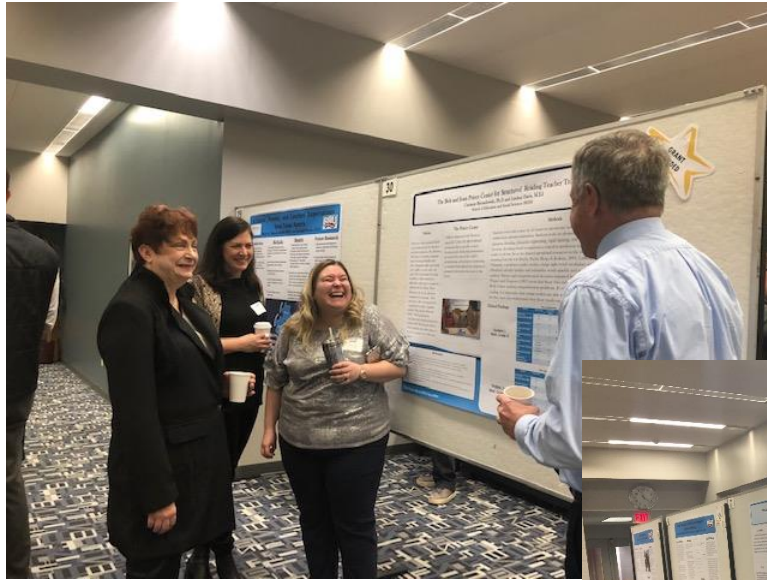
Research & Grants Expo



Research & Grants Expo



Research & Grants Expo



Research Posters
From
5 schools, Student Life, Title IX and RMU Online
Program



Research Participants

Researcher	School
Ann Jabro	SCIS
Anthony Moretti	SCIS
Artemisia Apostolopoulou Michelle Patrick	SBUS University of Patras, Greece
Dimitra Papadimitriou	SEMS
Ben Campbell Carol Nelson	SESS
Bruce Golmic	SESS
Carianne Bernadowski Lindsay Davis	SCIS
Diane Igoche Natalya Bromall Karen Pullet David Wood John Turchek George Semich James Bernauer	SESS
Gregory Krivacek	SBUS
Jessica Kamerer Donna McDermott Andrew Birk	SNHS
Kihyun Park	SBUS
Lisa Hernandez	Title IX
Zhou Yang	SESS
Paul Spradley Lauren Speerhas	CSS

Researcher	School
Kirstyn Kameg Sheree Shafer Luann Richardson Janene Szpak Neha Pandit Judith Kaufmann Janet Barber Brayden Kameg Tanya Fabian Christine Clark	SNHS UPITT
Jianyu Ma Yun Chu Robert Beaves Mary Hansen Brooke Turner Nadine Englert Ping Wang Christopher Johnson Priyadarshan Manohar Richard Mills	SBUS SESS JCU SNHS SCIS PNC Bank SEMS SBUS
RMU Online Terri Devereaux Janice Sarasnick Luann Richardson Jason Dorich Woodrow Winchester Rika Carlsen Daniel Holmes	RMU Online SNHS SEMS

Researcher	School
Terri Devereaux Janice Sarasnick Luann Richardson Jennifer Marth	SNHS

Posters not Included

Researcher	School
Steve Hodaszy	SBUS
Monica VanDieren Hyla Willis	SEMS SCIS
Monica VanDieren Andrew Ames Chad Wertley David Bennett Chris Devine Jackie Klentzin	SEMS SCIS Library
Ying Zhang Nathan Taylor Yun Chu Jianyu Ma	SESS SBUS
Yanbin Tu Yasmin Purohit John Clark Armand Buzzelli Won Joo Rika Carlsen Arif Sirinterlikci	SBUS SBUS Student Life SEMS

Introduction



A qualitative content analysis of media coverage of the New Orleans Jazz and Heritage Foundation Festival, Inc. demonstrated:

1. The building of two brands: Festival and the Foundation.
2. The development of public relations strategy and tactics.
3. Issues management surrounded conflict regarding race, geographic identity and localism.

Methods



Two research questions guided this study:

RQ1: How did the media present the evolution of the NOLA Jazz and Heritage Foundation?

RQ2: What public relations strategy and tactics were observed in media coverage of the Festival?

Thematic analysis - more than 600 news articles spanning 1968 through 1979 . Conducted to identify emerging themes in the media and identify public relations strategies and tactics.

Results



Table 1: Conflict Themes

1. Local vs. national music performers
2. Definition of jazz music
3. Artists and performers conformity to definition of jazz
4. Diversity representation crafts areas
5. Event management practices
6. Preservation of the area's culture
7. Localism vs. tourism
8. Festival Foundation Board composition and leadership



Table 2: Media Coverage Topics

1. Festival's ability to sustain itself
2. Identification of event producer
3. Solicitation/payment of performers
4. Coordination/manage event site/s
5. Sponsorship acquisition/promotion
6. Generation/evolution/role of Foundation

Table 3: Themes and Message Framing

Year	Theme	Elaboration
1969	"Let's Build It" Identity? What are we building?	Promote Tourism Local musicians called home to "grow" Fest. Willis Conover producer Local Community
1970	"It's happening" Grow it! Unique culture, cuisine, music people! Share It	Musician diversity Location diversity Music, heritage, food Miller Brewing sponsor George Wein producer "New Orleans Jazz & Heritage Festival" official name
1971	"Little Train Need that could" resources to grow Ingredients need better mix	Participation 100 local musicians Budgeting- promote?
1972	"Building the Track" Spread the Word "Contact Media"	Miller provides grant Initial stages of PR campaign

Table 3: Themes and Message Framing

Year	Theme	Elaboration
1973	"Building the Track"	Press conference Kick-off Talent Hunt
Time	"Authentic brand building"	Daily Bus Service "Best in Country" Coushatta Indians Mardi Gras Indians
1974	Party with great Identify food and music Formation Community event!	Come as "you are" Festival logo developed Festival as Community Event Alison Miner: Bigger and Better Steamboat Stomp T-shirts designed/sold
1975	"we're into It's Paying Off Differentiation	First profitable Festival Pays off \$50,000.00 loan \$30,000.00 in bank Fashion and jazz Gerald Joseph Fest poster No official spokesperson
1976	"Local Talent" Preserve The Brand Preserve the Experience Behind the music	150 of 160 local performers Recordings sold Visitor's Activities Booklet Figaro depth reporting 10-day festival

Table 3: Themes and Message Framing

Year	Theme	Elaboration
1977	"Support Local" Share Power & Wealth	5 "big" local performer get photos/profile stories \$25,000 contribution NO Crafters juried Discrimination claims
1978	"Stronger Every" An Year" Identity of our Own Diversity mecca	10 stages, 250 groups, 200 crafters, 40 food vendors, gospel tent Afrikaan-American Jazz Coalition Festival profits given to community
1979	"Celebrate" Record Breaker Share the Wealth Safety Embrace Diversity Take care of your own	10-year anniversary 17 day Festival Limit 45,000 tickets Bus transport to Fest. Advanced tickets for locals to evening events Parking at Dome



Conclusion

Campaign strategy emerged and Foundation evolved over time.

Festival Strategy/Messaging included:
Largest in world
Musically diverse

Only heritage/music festival spanning
several days held outdoors
Party! Great Food and Music

Tactics:
Print, broadcast (radio, TV), magazine
Sponsorship
Events
Celebrity Endorsement



Trump's News and the Times' News: Conflicting Views of a Middle East Dispute

Dr. Anthony Moretti

Department Head, Communication and Interim Department Head, English, SCIS



Introduction

A dispute between Saudi Arabia and Qatar that began in 2017 offered President Trump an opportunity to define his view of Middle Eastern politics. The *New York Times* was not impressed by what he said. Trump viewed the conflict in simple black and white terms: Saudi Arabia should be supported, while Qatar, a nominal ally of Iran, needed to get in line and back his efforts to isolate Iran and identify it as the locus of terrorism in the region. The newspaper considered this narrative naive and potentially dangerous to the region and around the world.

Method and Research Questions

Coding Period:
June 5-Dec. 31, 2017

White House "readouts" reviewed
New York Times' reports, editorials analyzed

- RQ1: How did the White House publicly discuss the conflict?
- RQ2: What narratives developed in the *New York Times*?
- RQ3: Did the *New York Times* refer to and support Al Jazeera?

Literature Review

Framing "helps to make sense of a broad array of information and events while suggesting a suitable course of action" (Nelson, Oxley and Clawson, 1997, p. 222)

Cultural attributes are essential in understanding societies: peoples considered different often are identified as threatening (Galtung and Ruge, 1965; Salwen and Garrison, 1989)

New York Times often limits scope of Middle East debate, thus "infecting the international news agenda with disfigured perceptions of the Mideast" (Barranco and Shyles, 1988, p. 255)

Al Jazeera loathed by Saudi Arabia because it "had the temerity to give voice to those who would question the House of Saud" (Pintak, 2006, p. 71)

Conclusions

To the president, Saudi Arabia was an essential American ally in reining in terrorism, which he insisted was being financed by Iran, which Qatar refused to accept.

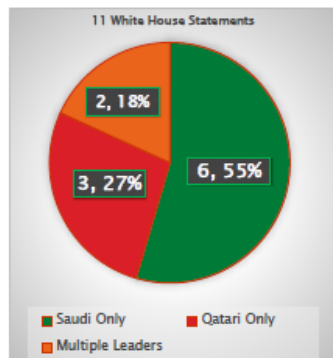
According to the newspaper, Trump could not see the Saudi-Qatari dispute as Saudi Arabia and Iran seeking to advance their prestige in the region.

In Trump's simplified world view, Iran had to be dealt with, and any nation that adopted this viewpoint was an automatic ally.

The *New York Times* remained vigilant in asserting that Saudi Arabia – Sunni Islam's most powerful nation – and Iran – Shia Islam's most powerful nation – both are in conflict with basic Western values.

New York Times reporter Thomas Erdbrink: "Qatar is of little or no strategic value to Iran" (July 5, 2017).

White House Statements



New York Times Reporting

Two distinct themes:

1. President Trump's affinity for the Saudis clouded his perception of the conflict
2. The president's staff often publicly criticized his judgment and actions

The effect:
Trump's position reduced American prestige in the region and neutered opportunities for key members of his administration to come up with solutions that all sides could support.

Al Jazeera



Al Jazeera became a minor item in the conflict once the Saudis dropped their demand that it be shuttered. However, the *New York Times*' editorial board wrote a powerful opinion piece, stating:

"In reality, by attacking Al Jazeera, the Saudis and their neighbors are trying to eliminate a voice that could lead citizens to question their rulers."

Exploring meanings and the consumption of official WWE merchandise

Artemisia Apostolopoulou & Michelle Patrick (SBUS), Robert Morris University, USA
Dimitra Papadimitriou, University of Patras, Greece

Purpose of Research

1. To assess consumers' identification and engagement levels with the World Wrestling Entertainment, Inc. (WWE) brand;
2. To explore meanings of official WWE merchandise; and
3. To examine if and how those meanings lead to positive WOM and purchase intention.

Literature Review

- Sport consumers buy and display licensed items as a way to support their favorite team and to connect with other team supporters.
- Sources of meaning of possessions (Richins, 1994): *Utilitarian value, Enjoyment, Interpersonal ties, Identity and self-expression.*
- The *MSLP* scale (Papadimitriou & Apostolopoulou, 2015) identifies five sources of meaning of sport licensed products: *Experience, Socialization, Aesthetics, Personal history, and Locality.*

Sample Size and Profile

- $N=1,656$ shoppers at the official online WWE store ($N=1,224$ domestic and $N=432$ international consumers).
- Respondents were in their majority single males between the ages of 25 and 34 years old and identified strongly with the WWE.



- High levels of engagement with the WWE brand were reported on all 13 measures, especially television viewing of weekly and pay-per-view programming and following the WWE and WWE Superstars on digital platforms.

Data Collection

- Data were collected in March-April 2018.
- Five-part online survey:
 - Brand engagement measures;
 - Consumption and meanings of official WWE merchandise;
 - Customer satisfaction;
 - Behavioral outcomes: WOM and purchase intention; and
 - Demographic profile and fan identification levels.
- Descriptive statistics, EFA, CFA and Structural Equation Modeling.

Results

Four-factor 21-item structure of the *MSLP* scale for the sample of online WWE shoppers that explained 71.6% of the variance of the product meanings construct:

1. **Experience** (6 items): Feelings and enjoyment from use of WWE merchandise;
2. **Socialization** (6 items): Connecting with the WWE and other WWE supporters;
3. **Aesthetics** (6 items): Aesthetic appeal and attractiveness of official WWE merchandise; and
4. **Personal History** (3 items): Self-expression and a reminder of people and events in one's life.

Results

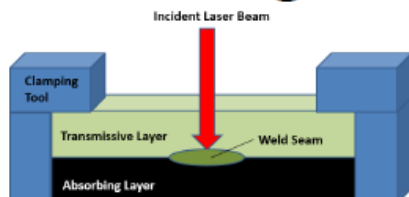
- The two primary motives for purchasing official WWE merchandise were to support one's favorite WWE Superstar and to use the product in one's everyday life.
- Across the board, respondents reported high levels of satisfaction with their purchases of official WWE merchandise.
- WWE possessions were seen as valuable because they featured the names or symbols of consumers' favorite wrestlers, had nice design, and publicly showed that the consumer was a fan of a specific wrestler.
- Willingness to recommend official WWE merchandise to others and intention to buy again in the future were high across all respondents.



Introduction

RMU and MECCO (a laser marking company) have been collaborating since Fall 2017 to investigate the process of welding plastics with modified marking systems containing high power lasers. Before taking the product line to market, MECCO needs to have expertise in welding plastics which includes: processes to evaluate customer needs, the ability to demonstrate the feasibility of welding their plastics, methods of optimizing welding parameters, and the resources to design a system that meets the manufacturing needs of the customer. This is the process developed to demonstrate the weld feasibility for thermoplastics.

Transmission Welding



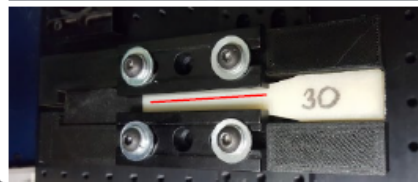
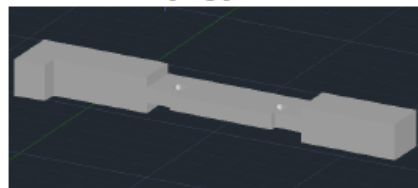
The most common way to weld two plastic is for one piece to be transparent to the laser and the other opaque. The parts are clamped together and held under pressure while the laser is absorbed at the interface between the two plastics to create the weld seam. The melted plastic expands and mixes to create the weld. It cools in a few seconds after the laser exposure ends.

Methods

The RMU Learning Factory has an injection molding machine capable of producing rectangular regulation ASTM dogbones samples. These test dogbones are cut and glued to make a cantilever double thick dogbone that overlaps the two plastics in the center. The light and dark end allow the dogbone to be pulled apart with shear force on the weld.

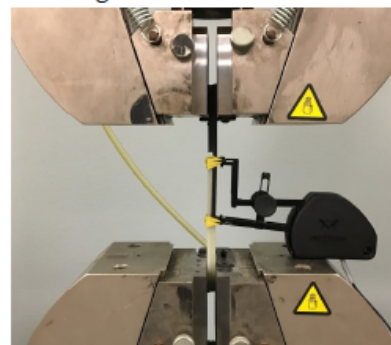


Special mounting spacers were designed and 3-D printed to guide the dogbones into place for clamping. Aluminum construction blocks and base plates were assembled to provide the clamping force needed on the parts. A torque wrench was used on the four mounting bolts to get consistent clamping pressure.



Shear Strength Testing

To test the welds, the dogbone samples are mounted in an Instron 5585H machine with the ability to perform shear tests along the weld joint. The pull tests are done according to ASTM standards requiring at least 5 identical runs to assess the strength of plastics and joints. Uncut dogbones were pulled to get a baseline control strength value for the plastic. A good weld will have a strength similar to the uncut solid plastic dogbones.

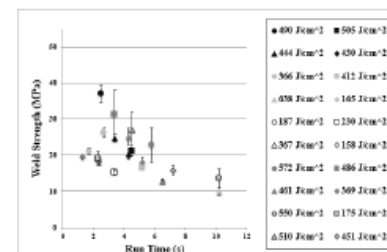


One extra dogbone for each test set is welded and split to visually assess the weld quality and measure the weld area to calculate strength normalized to pressure (MPa) rather than just a directly measured force (N) value.



Results

The shear strength data can be used to identify optimal weld parameters. Plotting laser settings with weld strength (Mpa) vs processing time (s), the strongest and fastest combinations are apparent. PA6 welded with the 300W laser is shown below.



Conclusions

By partnering with RMU, MECCO has been able to produce test samples of the Polyamides PA6 and PA66, weld them using various parameters, determine the optimal parameters, and report the resultant strengths. This methodology can be repeated with any thermoplastic to establish feasibility for manufacturing applications.

Acknowledgements

The authors would like to thank MECCO for their financial support and access to their lasers for this research effort.

Leadership by Design: Principal Certification for the Pittsburgh Urban Leadership Corps PDE Innovative Principal Residency Program Grant



Dr. Bruce Golmic, SESS

Introduction

The partnership between Robert Morris University and Propel Schools provides aspiring principals in urban settings with the education, experiences and support to develop the leadership skills required to effectively manage a high-need Propel Charter School.

Goals

- ❑ A pipeline of highly effective school leaders with the appropriate skills and tools to increase student achievement and improve school climate in urban settings
- ❑ Partner with Propel to provide RMU's high quality Principal Certification Program to aspiring Propel principals
- ❑ Develop effective principals who will lead in a high-needs school
- ❑ A reduction in turnover among administrators at Propel Schools, as a result of candidates in the RMU-LEAD program serving as principals for at least three years
- ❑ Support residents after completion of the Principal Certification Program

Expected Outcomes

- ❑ A continued partnership between Robert Morris University and Propel Charter School with doubled numbers of candidates in the Principal Certification Program in the 2018-19 school year.
- ❑ By taking part in outcomes-based field experiences and receiving one-on-one guidance with principal mentors and university faculty, candidates in the 2018-19 Principal's program will be able to assess and document the successful performance of leadership skills and competencies.
- ❑ A group of effective administrators serving in Propel schools from 2020 to 2023 and beyond.
- ❑ Analysis of I-LEAD portfolio rubrics will indicate mean student academic achievement of 80% or greater.
- ❑ Analysis of mentor principal surveys will support an 80% or greater satisfaction in student preparation and performance on blended field experience based coursework.
- ❑ Transcript reconciliation will indicate that 100% (6 of 6) of Propel principal candidates have met program and graduation requirements.
- ❑ The 2018-19 entering PULC cohort will receive the necessary education, training, and support by the administrative team of the partners, enabling them to serve as effective administrators in Propel schools starting in 2020.

Leadership and School Improvement Experiences

- ❑ Define and incorporate the district's vision, mission, and strategies into a school improvement initiative.
- ❑ Model for others in order to create a culture conducive to successful teaching and learning.
- ❑ Create a well-organized, effective and safe learning environment linked to the strategic plan and research-based practice.
- ❑ Communicate effectively with key stakeholders.

Leadership and Student Achievement Experiences

- ❑ Discuss the process of change in order to improve student achievement.
- ❑ Demonstrate how student achievement data are used in decisions on curriculum and instruction and how to access data from various sources.
- ❑ Explain the importance of a coherent curriculum and effective instruction as key strategies for improving student performance.
- ❑ Understand the implications of communicating assessment results to students, teachers, and parents.

Leadership and Special Education Experiences

- ❑ Provide high quality standards-based instruction/intervention that is matched to students' needs.
- ❑ Implement programs that reflect awareness and responsiveness to diverse needs of students with disabilities.
- ❑ Demonstrate an understanding of planning, coordination, and delivery of effective instruction required for inclusive settings.
- ❑ Interact and meet effectively with families during IEP meetings.

Leadership and Professional Development Experiences

- ❑ Design differentiated professional development options that are related to educational goals.
- ❑ Generate professional growth plans based on district vision, goals, and individual professional learning needs.
- ❑ Engage stakeholders in effective improvement efforts by creating and maintaining an effective learning culture.
- ❑ Communicate effectively with key stakeholders.

The Bob and Joan Peirce Center for Structured Reading Teacher Training

Carianne Bernadowski, Ph.D and Lindsay Davis, M.Ed
School of Education and Social Sciences (SESS)



Dyslexia

Dyslexia is often misunderstood and misinterpreted by educators and interventionists. By definition, Dyslexia is a complex, language-based learning disability that affects language skills, specifically one's ability to read, write and spell. This neurological learning disability is differentiated by difficulties with word recognition, spelling and decoding. These differences lie in the phonetic component of language. This deficient is often unexpected in comparison to other cognitive abilities (Shaywitz & Shaywitz, 2003). With appropriate systematic and explicit instruction, readers with Dyslexia are able to learn strategies that allow them to read text at grade level with their peers.

The Peirce Center

Children diagnosed with Dyslexia attend the Center for interventional instruction that is specific to their learning needs. Screening instruments are used at the start of the child's programming, and progress monitoring is completed throughout the program to adequately determine the needs of the learner.



Methods

Students work with a tutor for 25 hours in one-on-one sessions of systematic, explicit and multisensory phonics instruction. Students work on phoneme (sound) identification, phoneme blending, phoneme segmenting, rapid naming, and nonsense word decoding. Accurate decoding (word recognition) is critical to proficient reading because it enables the reader to devote his or her limited attentional resources to the more important task of making meaning from the text (Fuchs, Fuchs, Hosp, & Jenkins, 2001; LaBerge & Samuels, 1974). Ultimately a proficient reader creates a large sight word vocabulary and can easily and effortlessly identify familiar and unfamiliar words quickly and accurately. Without this ability, students' fluency and comprehension becomes impaired leaving young readers frustrated. Wagner and Torgesen (1987) posits that those who struggle with phonics acquisition are likely to have reading comprehension problems. If comprehension is the purpose for reading, it is imperative that young readers are able to not only decode the words on the page, but they must also understand what those words mean individually and together.

Clinical Findings

Student 1
Male; Grade 9

Pre-Assessment				Post-Assessment (After 25 Hours of Intervention)			
Subtest	Raw Score	Percentile Rank	Descriptive Term	Subtest	Raw Score	Percentile Rank	Descriptive Term
Elision (EL)	29	87	Average	Elision (EL)	82	75	Average
Blending Words (BW)	24	87	Average	Blending Words (BW)	28	84	Above Average
Phoneme Isolation (PI)	26	87	Average	Phoneme Isolation (PI)	27	50	Average
Memory for Digits (MD)	16	16	Below Average	Memory for Digits (MD)	17	25	Average
Nonword Repetition (NR)	16	9	Below Average	Nonword Repetition (NR)	28	91	Above Average
Rapid Digit Naming (RD)	18:29 *seconds	25	Average	Rapid Digit Naming (RD)	12:50 *seconds	68	Average
Rapid Letter Naming (RL)	12:32 *seconds	50	Average	Rapid Letter Naming (RL)	14:44 *seconds	50	Average
Blending Nonwords (BN)	20	87	Average	Blending Nonwords (BN)	27	98	Superior
Segmenting Nonwords (SN)	21	50	Average	Segmenting Nonwords (SN)	31	> 99	Very Superior

Student 2:
Male; Grade 5

Pre-Assessment				Post-Assessment (After 25 Hours of Intervention)			
Subtest	Raw Score	Percentile Rank	Descriptive Term	Subtest	Raw Score	Percentile Rank	Descriptive Term
Elision (EL)	14	5	Poor	Elision (EL)	88	91	Above Average
Blending Words (BW)	22	25	Average	Blending Words (BW)	28	84	Above Average
Phoneme Isolation (PI)	22	16	Below Average	Phoneme Isolation (PI)	82	95	Superior
Memory for Digits (MD)	18	9	Below Average	Memory for Digits (MD)	14	9	Below Average
Nonword Repetition (NR)	14	9	Below Average	Nonword Repetition (NR)	17	87	Average
Rapid Digit Naming (RD)	28:00 *seconds	16	Below Average	Rapid Digit Naming (RD)	22:00 *seconds	9	Below Average
Rapid Letter Naming (RL)	19:00 *seconds	87	Average	Rapid Letter Naming (RL)	24:00 *seconds	9	Below Average
Blending Nonwords (BN)	14	9	Below Average	Blending Nonwords (BN)	19	87	Average
Segmenting Nonwords (SN)	15	25	Average	Segmenting Nonwords (SN)	28	68	Average

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CIS Cyber Scholars:

Developing a Faculty-Student Mentor Model

Diane Igoche (SCIS), Natalya Bromall (SCIS), Karen Poullet (SCIS), David Wood (SCIS)
John Turchek (SCIS), George Semich (SESS), James Bernauer (SESS)



Introduction

The Computer and Information Systems (CIS) Department will establish the CIS Cyber Scholars Program to equip low-income, academically talented community college transfer students with a demonstrated financial need with the financial, academic and practical support to advance into STEM careers or graduate school.

Objective 1: Recruit 30 low-income, academically talented undergraduate students into the CIS Cyber Scholars Program.

Objective 2: Through the CIS Cyber Scholars Program, 100percent of scholars will graduate with a STEM degree.

Objective 3: Through the CIS Cyber Scholars Program, 90 percent of enrolled scholars will enter STEM careers or graduate programs.

Objective 4: Institutionalize effective practices to support transfer students which promote their success in computing majors and careers.

Supporting CIS Cyber Scholars

Faculty-Student Mentorship

Model



IntegrateRMU Course

- Specialized Orientation Student Seminar
- Identify existing support structures
- Form peer networks
- Discuss pathway to graduation and beyond
- Design tentative course trajectory

Active Learning Component

Cyber Forensics

Data Analytics

Information Security and Programming

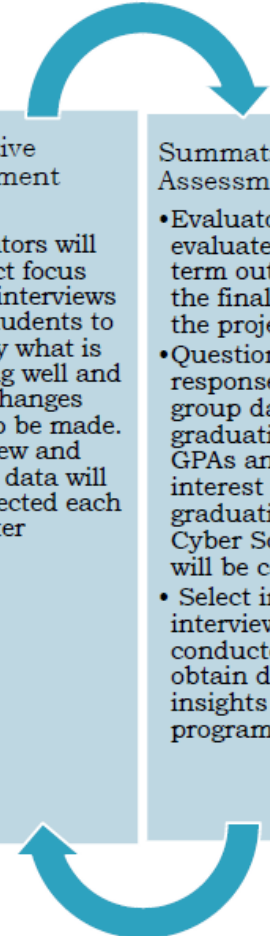
Proposed Evaluation

Formative Assessment

- Evaluators will conduct focus group interviews with students to identify what is working well and what changes need to be made. Interview and survey data will be collected each semester

Summative Assessment

- Evaluators will evaluate longer-term outcomes in the final year of the project.
- Questionnaire responses, focus group data, STEM graduation rates, GPAs and career interest for graduating CIS Cyber Scholars. will be collected.
- Select individual interviews will be conducted to obtain deeper insights into the program.





Whistleblowing by the CPA: Legality vs. Ethics



Gregory Krivacek, PhD, CPA, CGMA

Robert Morris University, School of Business (SBUS)

Legal Dilemma

Federal Laws:

SEC Act of 1933 and 1934

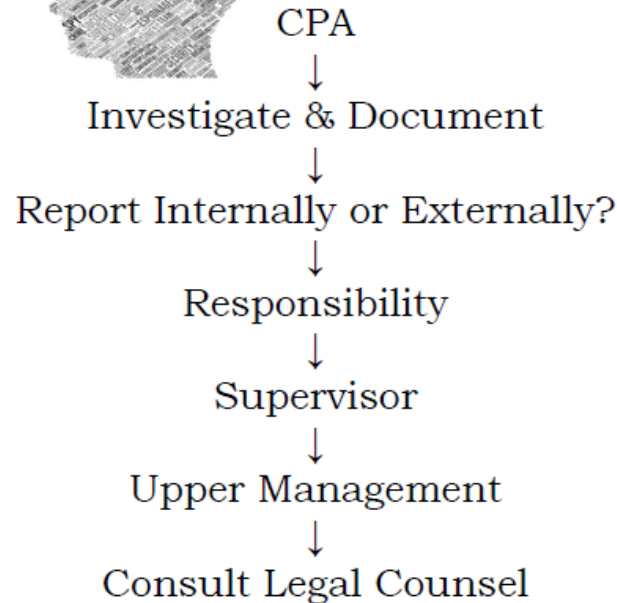
- 1929 Stock Market Crash
- Securities and Exchange Commission
- Securities Registered

Sarbanes-Oxley Act (SOX) of 2002

- Enron
- WorldCom
- Arthur Anderson
- Internal or External Reporting

Dodd-Frank Wall Street Reform & Consumer Protection Act of 2010

- Lehman Brothers
- External reporting
- Re-build trust



Ethical Dilemma

Ethical Rules:

American Institute of Certified Public Accountants (AICPA)

Code of Professional Conduct

- Member in Business (AICPA, 2014)
- Member in Public Practice (AICPA, 2014)
- Material Fraud
- Client Confidentiality
- Public Trust (AICPA, 2014)
- Whistleblowing decision

State Board of Accountancy Rules of Conduct

- CPA License at Risk

Conclusions

Is there a legal or professional (public interest) responsibility of the CPA to Whistleblow?

Code of Professional Conduct states that CPA can whistleblow if:

- Validly issued and enforceable subpoena
- Compliance with applicable laws and government regulations

Code of Professional Conduct does not prohibit CPA from following the law

Whistleblower not protected if not reported to SEC per Supreme Court Ruling (February, 2018)

Consultation with legal counsel prior to disclosing client information

Call AICPA Ethics Hotline 1-888-777-7077



Integration of Cyber Security into Informatics & Healthcare Technology Curriculum

Dr. Jessica L. Kamerer EdD, MSN, RNC-NIC, CHSE; Dr. Donna McDermott PhD, RN, CHSE & Andrew Birk CNMT, R.T. (CT)
Robert Morris University, School of Nursing & Health Sciences

Background

- 94% of healthcare institutions reported being victim of a cyberattack, with healthcare agencies being the most targeted and affected by cyberattacks in recent years. (Luna, Rhine, Myhra, Sullivan & Kruse, 2015).
- Personal Health Information (PHI) is worth up to 55x more on the black market than a social security number, therefore has become more targeted in recent years (Luna et al., 2015).
- Cyber-criminals have the ability to cripple a health care organization through the use of hacking, malware, ransomware and data theft.
- Personal loss due to identify theft and data tampering can also be astronomical to patient and worker victims.

Methods

A literature review was conducted to identify the impact of cyber security threats on healthcare and how or if coverage of the healthcare informatics curriculum required by accreditation organizations included cyber security content.

- The databases of PubMed (Medline), CINAHL, and ProQuest were used to conduct literature searches
- Key terms used: electronic health record, cybersecurity, security, electronic medical record, and private health information.
- Initial sample of 67 articles, after screening 22 were found relevant and reviewed by the research team.



Importance

- Healthcare breaches also accounted for 21.1% of all the cyber security breaches worldwide (McCarthy, 2015).
- In 2013, it was estimated that Americans spent 12 billion dollars out of pocket to deal with the consequences of their compromised medical files (Luna et al., 2015)
- Self-inflicted mistakes due to a lack of healthcare personnel knowledge & education regarding cyber security safety can be alleviated by computer competency, education, organizational culture, and proper hiring/termination procedures (Wanyonyi, Rodrigues, Abeka, Ogara, 2017).
- MSN prepared nurses must be properly trained to recognize, assess, and report cyber security threats within their organization as part of the informatics and healthcare technologies curriculum.



AACN Essentials of Master's Education

AACN is a national agency that manages accreditation of nursing programs across the United States and other countries. They drive curriculum requirement through 9 Essentials, which outline the required content of programs to receive accreditation status.

- The Essential V relates to healthcare technology and informatics curriculum requirements.

Essential V: Informatics and Healthcare Technologies

Recognizes that the master's-prepared nurse uses patient-care technologies to deliver and enhance care and uses communication technologies to integrate and coordinate care (AACN, 2011).

Recommendations for Informatics Curriculum: Increase Cyber Security Content

Top Categories of Cyber Security Threats

PHYSICAL

- Security threats that occur due to lost, discarded, or stolen non electronic records. Result from unintentional employee actions such as improper disposal or filing of paper documents, leaving workstations unsecured, or responding to a phishing request

PORTABLE DEVICES

- This category includes lost, stolen, improperly discarded, or the hacking of mobile devices. Leaving cell phones and laptops unattended or using unencrypted devices contribute to breaches in this area.

INSIDER USE

- Threats occur when an employee or validated contractor intentionally violate cybersecurity protocols at an organization. Insider attacks largely contribute to security threats with ePHI, especially when there is a lack of access control mechanisms in place at an organization.

TECHNICAL

- Threats involve the use of software and data control to influence the access to organizational information or computing systems. Social engineering threats manipulate human trust or desire to encourage people to divulge personal information such as passwords.

ADMINISTRATIVE

- Threats occur when there is a breakdown in the day-to-day operations typically governed by company policies, procedures, standards, and guidelines. In order to combat these threats, administrative controls are enabled in the form of government, corporate, hiring, password, and disciplinary policies.

Key Recommendations to Combat Cyber Threats

ADDRESS HUMAN FACTORS

- Human error due to misuse & lack of knowledge by healthcare workers remain a root cause for insider use violations.
- Employee training along with proper employee onboarding & termination procedures alleviate much of the vulnerability associated with the internal security environment.
- Clear employee responsibilities and least-privilege access should be established to mitigate the chance of human-error.

RECOGNIZING PREVALENCE OF ATTACKS

- The incidence of external attacks are drastically raising in recent years because medical record information is worth 50x more on the black market than just a single piece of personal information.

SECURING PERSONAL DEVICES

- Large security breaches can be mitigated by simply keeping track of personal computers & phones with PHI on them.
- Personal devices should use encryption software to protect the information contained within them if they are lost or stolen.

STAY VIGILANT

- Cyber-criminals are becoming increasingly advanced.
- Proper monitoring, maintenance, and updates are imperative to safeguard networks.
- Keep employees updated on new tactics and measures to combat cyber crime.

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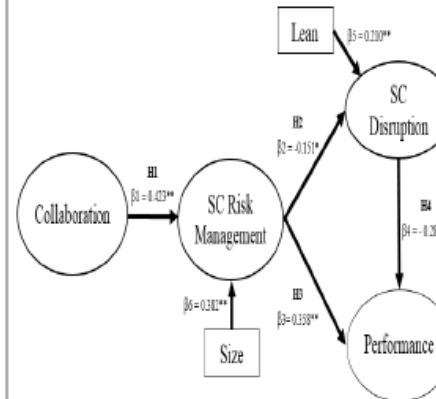
Introduction

The purpose of this study is to explore how collaboration with supply chain partners facilitates risk management, reduces the likelihood of supply chain disruptions, and increase firm performance.

Methods

Using the International Manufacturing Strategy Survey (IMSS) dataset and structural equation modeling, this study tests coordination mechanism among collaboration, risk management, and performance. Firms in Japan and China are compared.

Figure #2



Conclusions

This paper represents one of the initial attempts to investigate and compare risk management practices.

This paper provides guidelines for making the supply chain process more secure and profitable through the analysis of a risk-management survey administered to firms in both Japan and China.

Figure #1

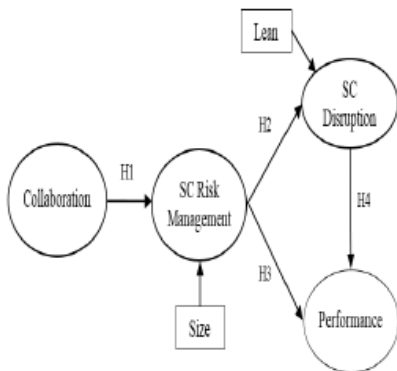


Table #1

Construct	Items
Collaboration	Suppliers
	Customers
Supply Chain Risk Management	Prevention
	Response
	Recovery
Supply Chain Disruption	Supplier
	Operations
	Delivery
Performance	Sales
	Return on Sales

Results

The results of this study suggest that the collaborative supply chain risk management can mitigate the negative impact of supply chain disruptions and subsequently improve operational performance.

Bibliography

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Creation of Inteprofessional Workshops to Enhance Graduate Students' Knowledge on Management of Mental Health Diagnoses in Children & Adolescents



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INTRODUCTION

- Substantial need exists to prepare healthcare professionals to manage the increasing prevalence of mental health conditions, *specifically in the child and adolescent population*.
 - One in five children and adolescents in the United States experiences mental health problems with up to one-half of all mental health diagnoses emerging before the age of 14 (National Institute of Mental Health, 2015).
 - Suicide is the third leading cause of pediatric deaths between the ages of 10 and 14 years and the second leading cause of death among individuals between the ages of 15 and 34 years (Centers for Disease Control [CDC], 2015).
- The limited access to quality mental health care has become a national crisis with estimates that only 20-25% of affected children receive appropriate treatment (American Academy of Child and Adolescent Psychiatry, 2018; CDC, 2013).

STUDY PURPOSES

- (1) enhance knowledge of health care professionals in the assessment and treatment of common mental health disorders in children and adolescents and (2) provide for interprofessional team standardized patient (SP) simulation scenarios to enhance each disciplines' ability to work in a team.

DESIGN

- Quasi-experimental pre-post-test design; IRB approval obtained from Robert Morris University

SP SCENARIOS

- 3 scenarios developed by researchers and practicing expert clinicians in disciplines of nursing, counseling, and pharmacy
- Scenarios reviewed by independent content experts for content validity
 - 7-year-old male presenting for a second follow-up visit after initiating medication for ADHD
 - 9-year-old male presenting to primary care for c/o ongoing intermittent belly pain
 - 16-year-old female presenting to pediatrician with weight loss (Adderall abuse), cutting, and thoughts of suicide.

SAMPLE

- Students enrolled in the BSN-DNP FNP and PMHNP program at RMU
- Students enrolled in the post-master's PMHNP certification program at RMU
- Students enrolled in the Master's in Counseling program at RMU
- Pharmacy students and residents enrolled at the University of Pittsburgh

INSTRUMENTS

- Demographic Questionnaire
- Two researcher developed pre/post-tests based on learning objectives of the SP simulations
- Student Perceptions of Interprofessional Clinical Education-Revised instrument, version 2 (SPICE-R2)
- Debriefing Assessment for Simulation in Healthcare (DASH) Student version
 - 7 item Likert scale
 - 1=Extremely Ineffective and 7=Extremely Effective

INTERVENTION PROTOCOL

- Two 6 hour workshops
 - Workshop 1 consisted of interprofessional lectures on ADHD and anxiety and also included two SP simulations/debriefings. Workshop 2 consisted of a more complex case and included an interprofessional lecture on depression, self-harm, and substance abuse in adolescents and a SP simulation/debriefing.
- Prior to the delivery of the workshops, students who consented to participate completed demographic questionnaire, pre-test, and SPICE-R2
- Following completion of the workshops, students completed post-test; SPICE-R2; and DASH

SAMPLE DEMOGRAPHICS

- Workshop 1 (N=29)
 - 76% female; 83% Caucasian
 - MS Counseling=17%; FNP=48%; PMHNP=27%; PMHNP Cert.=7%
- Workshop 2 (N=31)
 - 74% female; 74% Caucasian
 - MS Counseling=13%; FNP=55%; PMHNP=16%; PMHNP Cert.=3%; Pharmacy=13%

RESULTS

Workshop 1: Paired Samples t-Test for Knowledge N=25

	Mean	SD	Std. Error Mean	t	df	Sig (2-tailed)
Pre-Test	11.6	2.30	.462	25.11	24	.000
Post-Test	15.2	2.60	.520	29.27	24	.000

Workshop 1: Paired Samples t-Test for SPICE-R2 N=25

	Mean	SD	Std. Error Mean	t	df	Sig (2-tailed)
Pre-SPICE	37.40	6.66	1.33	28.085	24	.000
Post-SPICE	42.52	5.09	1.01	41.753	24	.000

Workshop 1: DASH Mean Score=36.6

Workshop 2: Paired Samples t-Test for Knowledge N=31

	Mean	SD	Std. Error Mean	t	df	Sig (2-tailed)
Pre-Test	5.03	1.58	.284	17.7	30	.000
Post-Test	6.87	1.45	.261	26.2	30	.000

Workshop 2: Paired Samples t-Test for SPICE-R2 N=31

	Mean	SD	Std. Error Mean	t	df	Sig (2-tailed)
Pre-SPICE	41.00	7.27	1.30	31.396	30	.000
Post-SPICE	42.32	7.53	1.35	31.278	30	.000

Workshop 2: DASH Mean Score=37.89

STRENGTHS/LIMITATIONS

- Strengths:
 - Workshop materials developed and presented by an interprofessional team of expert NPs, pharmacists and counselors
 - Researchers adhered to the International Nursing Association for Clinical Simulation and Learning's (INACSL) Standards of Best Practice: Simulation
 - Data analysis from both workshops indicate that participants had statistically significant gains in knowledge of the content, enhanced perceptions of the interprofessional team, and valued the debriefing
- Limitations included small sample size and researcher developed pre- and post-tests

CLINICAL IMPLICATIONS

- National shortage of child and adolescent providers
 - Our workshops/simulations can be adopted by other schools of nursing to enhance future provider knowledge and confidence of caring for children with mental health diagnoses to enhance quality of care for this vulnerable population
 - There is a preceptor shortage and incorporation of child/adolescent simulations may be used as an additional method to educate students



TO STOP SEXUAL ASSAULT.
GOVERNOR.PA.GOV/ITS-ON-US

"It's On Us" Initiative to Reduce/Prevent Sex- and Gender-Based Violence

Lisa H. Hernandez

RMU Title IX Office



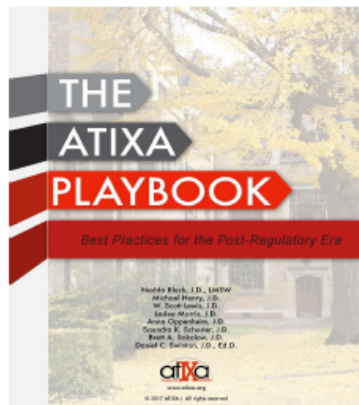
Introduction

The goals of this initiative are

1. To improve awareness, prevention, reporting, and responsive systems regarding sex- and gender-based violence at RMU.
2. To remove/reduce barriers that prevent survivors of sexual violence from reporting and accessing vital resources.
3. To initiate significant and sustainable positive changes to campus culture.

Methods

1. Develop and produce a sexual violence prevention video for all FYSP students;
2. Administer a campus climate survey to staff, faculty, and administrators;
3. Spring Programming for students entitled "The Drunk Sex Problem" (re: the intersection of social culture and sexual assault);
4. Upgrade to Maxient "Conduct Manager" student conduct software to be utilized by Title IX, Student Life, and other entities on campus;
5. ATIXA Certifications for Title IX staff and additional training materials.



Predicted Results

The Title IX Office hopes the result of these efforts will be:

1. To grow awareness, engage students, and ultimately reduce the amount of sexual violence affecting our community.
2. To obtain baseline information from staff/faculty/administration re: familiarity with and understanding of Policy on Sexual Misconduct;
3. Capture trends and analytics regarding sexual violence;
4. Obtain certification from the Association of Title IX Administrators for Title IX staff, as well as updated training materials for volunteer investigators and hearing panels.



The Experts in Student Conduct Software

(From Gentry McCreary's "The Drunk Sex Problem")
Alcohol and the 4 Mentalities

Alcohol Use Positively Correlated to:

1. Victim Blaming
2. Minimization
3. Solidarity
4. Social Pressure



Conclusions

Funds for this initiative have just been secured, so please stay tuned for our outcomes!

Firm size effects on stock returns in M&A in Asian markets

Jianyu Ma, Yun Chu & Robert Beaves

School of Business



Introduction

To explore the size effects in Asian emerging markets, we use mergers and acquisitions deals from Asian emerging markets as sample data and systematically examine the size effects in abnormal returns, real returns, and expected returns. We investigate the correlations between the firm size and the coefficients of alpha and beta generated by utilizing the market model. To reduce the bias effects caused by outliers of the sample and heteroscedasticity of the distribution of the returns, we use both ordinary least square market model and bootstrapping specification when estimating the expected returns.

Hypotheses

H1: The small firm portfolio has a higher average alpha than the large firm portfolio(s).

H2: The small firm portfolio has a higher average beta than the large firm portfolio(s).

H3: The small firm portfolio has a higher expected return than the large firm portfolio(s).

H4: The small firm portfolio has a higher actual return than the large firm portfolio(s).

H5: The small firm portfolio has a higher abnormal return than the large firm portfolio(s).

Methodology

We use two models, an ordinary least square market model and a Bootstrapping regression model, to estimate expected returns in the event window separately and analyze size effects through a comparison of statistical results between the two models and among the four portfolios. We report and compare alpha coefficients, beta coefficients, expected returns, real returns, and abnormal returns estimated on the announcement day among the four portfolios. We also report the total risk (measured by standard deviation), and risk adjusted return among different portfolios.

We estimate abnormal returns and variances using following equations.

$$(1) R_{it} = \alpha_i + \beta_i R_{mt} + e_{it}$$

$$(2) AR_{it} = R_{it} - \hat{\alpha}_i - \hat{\beta}_i R_{mt}$$

$$(3) \sigma_i^2 = \frac{1}{n-1} \sum_{t=1}^{120} (R_{it} - \bar{R})^2$$

$$(4) \sigma_i^2 = \beta_i^2 \sigma_M^2 + \sigma_{(e_i)}^2$$

Presented at the 2019 R&G Expo @RMU

Results

Table 1: Comparisons of actual returns, predicted returns, alphas, betas, and abnormal returns

Panel A: Mean value of actual return, predicted return, alpha, and beta in each portfolio.

	Small (S)	Low medium (LM)	High medium (HM)	Large (L)
Actual R	2.25	1	0.71	1.06
Predicted R	0.47	0.18	0.25	0.02
Alpha	0.3	0.16	0.08	0.07
Beta	0.64	0.85	0.87	1.02
Abnormal R	1.79	0.82	0.46	1.04

Panel B: Difference of actual returns, predicted returns, alphas, and betas among portfolios

	S - L	S - LM	S - HM	HM - L
Actual R	1.19*	1.26*	1.55**	-0.06
Predicted R	0.45***	0.29**	0.22***	0.23*
Alpha	0.23***	0.14**	0.22***	0.09*
Beta	-0.39***	-0.21***	-0.23***	-0.17***
Abnormal R	0.75	0.97*	1.33**	-0.58

The symbols *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively.

Conclusions

We find that size effects can be captured in every step in the process of the abnormal returns. Alpha coefficient can capture size effects and beta does not. The mean value of the alpha coefficients for small acquiring firms is significantly higher than the mean alpha value for larger acquiring firms. The striking finding is that the mean value of the beta coefficients for large firms is significantly higher than the value of small firms. The finding indicates that large firms are more sensitive to the fluctuation of the systematic risk rather than the small firms.

Acknowledgement

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This paper has been accepted by *International Journal of Business and Systems Research*.

March 15, 2019,
RMU Library Nook, USA

Athletes', Parents', and Coaches' Expectations from Team Sports



Mary A. Hansen (SESS, RMU) and Brooke Turner (JCU)



Introduction

This study explored the

- ❖ Relationship between athletes', parents', and coaches' expectations from team sports.
- ❖ Expectations of each group of the role of coaches in today's competitive school sports teams.

Literature

- ❖ Athletes prefer coaches who act as mentors and teachers; who demonstrate commitment, organization, and discipline; and who build their mental, physical, and technical skills (Becker, 2009).
- ❖ Parents' beliefs, actions, and attitudes about the value of athletics influence their children's attitudes and motivation to be involved (Neely & Hold, 2014, p. 256).
- ❖ Successful coaches use life skills as the primary objective of their coaching philosophy (McGladery, Murray, & Hannon, 2010).

Methods

Conducted Separate Focus Groups of Parents, Coaches and High School Athletes from Team Sports

Focus Group Protocol Addressed Expectations Surrounding:

- ❖ Playing Time Determinations and Concerns
- ❖ Coach's Role(s) Related to Sports, Academics, and Life Skills
- ❖ Focus on Sports versus Academics

Results

- ❖ Stakeholders have strong views about playing time
- ❖ Coaches make final decision
- ❖ Parents and players generally trust the coaches' decisions
- ❖ Perception of "favorites" clouds faith in coaches' playing time decisions
- ❖ Coaches are expected to teach sports and address athletes' growth and development in other areas and conduct team-based community service
- ❖ Coaches are expected to help athletes with college recruitment and selection

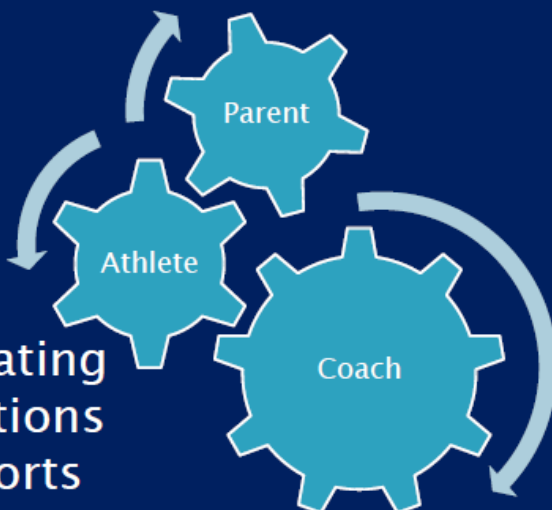
Future Research

- ❖ Questionnaire development based on literature and focus group results
- ❖ Large scale survey research pilot study from all parents, athletes and coaches at one Ohio school district
- ❖ Psychometric item analysis and content review
- ❖ Wide scale instrument dissemination

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Investigating
Expectations
from Sports



College & Career Immersion Program (CCIP)

Supporting Nursing Education and Workforce Diversity

Nadine Cozzo Englert, PhD, MSN, RN - SNHS



Introduction

There is a need for more racial, ethnic, and gender diversity among nurses in order to improve quality of care, cultural responsiveness, and reduce health disparities (IOM, 2011).

Goals

- Create a targeted outreach program to recruit diverse students from populations underrepresented in the nursing profession.
- Establish a pipeline of diverse students interested in nursing as an academic major and professional career.



Program Methods

Target audience: High school students from underrepresented groups in nursing, specifically men and individuals from minority backgrounds.

The *Consortium for Public Education (CPE)* assisted with the recruitment of diverse students in the Pittsburgh region

CCIP Immersion Sessions:

1. **Nursing as a Career Choice**
 - Simulation activities and hands-on nursing procedures
 - Professional Development
2. **Nursing as a College Major**
 - Center for Student Success
 - Test for Success in Nursing
 - Navigating college application/admissions
3. **Peer/Professional Mentorship**
 - Multicultural Student Center
 - Women's Leadership & Mentorship Program (WLMP)
 - Nursing Student Mentors

Data Collection

- Demographic information
- Admissions tracking



Results

59 student participants from diverse and underrepresented backgrounds from 3 schools

- McKeesport
- Pittsburgh Public – Perry
- Woodland Hills

23 students (39%) reported interest in nursing as a college major after the CCIP

10 students (17%) applied to RMU for Fall 2019

- 8 Nursing
- 1 Accounting
- 1 Undecided

Conclusions

The U.S. is becoming more diverse, yet the professional nursing workforce remains predominantly white (81%) and female (91%) (Smiley et al., 2018).

A diverse nursing workforce requires targeted and strategic recruitment & retention initiatives

The **CCIP** was a **successful** outreach program that formalized **partnerships** and established **pipelines** for prospective nursing students from diverse backgrounds underrepresented in nursing.

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Using Technology To Influence and Support A Culture of Retention

Paul David Spradley, Ed.D. (CSS), Lauren E. Speerhas, M.A. (CSS)



Introduction

Research suggests that students entering college today have more diverse needs and are experiencing greater financial pressure. Student success has needed to evolve from supporting first year and special populations to include social, financial and academic risk assessment and comprehensive coaching.

Q1: What might a student's pre-enrollment and current academic attributes tell the University about the student's need for support?

Q2: How can a small private institution improve communication around students with concerning academic attributes?

Methods

- Historical data was collected in the student data management tool NAVIGATE
- Data collected from Navigate included:
 - # of high risk students
 - # of alerts sent from faculty
- 8 academic and pre-enrollment metrics determine student risk. Metrics include:
 - Cum GPA; GPA Trend; High School GPA; Transfer student; Avg. outcome in major; Percentile rank in major; Earned to attempted credit ratio; Lifetime accumulated credits



Conclusions

- The addition of an advanced student data management system, NAVIGATE, provided RMU the capacity to more quickly identify students at risk of stopping out partially or fully from the University
- While RMU had utilized an early alert system for nearly 15 years, the addition of NAVIGATE and the partnership between EAB and RMU generated strategic and more frequent intentional conversations around academic success of students netting positive results in usage by faculty and staff and academic improvement of the students

Results

- 164 alerts submitted by faculty and staff from August 1, 2018 to February 28, 2019
- In Fall 2017, 63% of faculty submitted mid-term grades. In Fall 2018 88% submitted grades.
- The Center for Student Success met with 168 students who had D, F, or N mid-term grades in the Fall 2018
 - 92% were retained to Spring 2019
 - Average cumulative GPA increased from 2.71 to 2.76
 - Average credits completed increased from 90.1% to 91.4%

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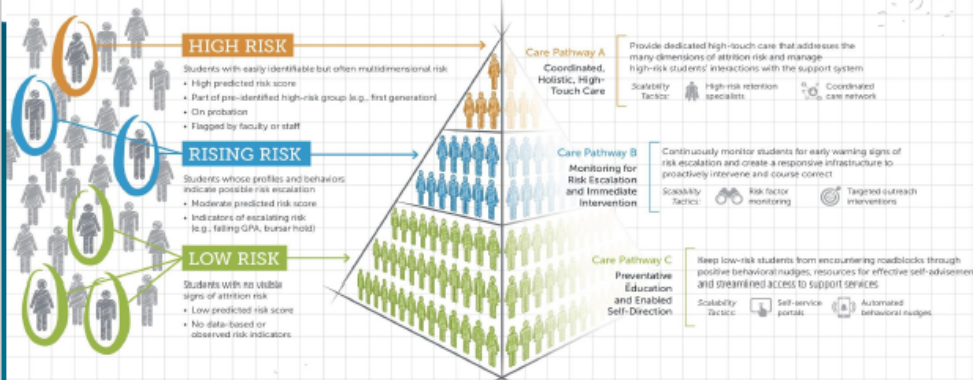
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An Innovative Framework

Organize Your Student Population with Risk Stratification

Building Blocks for Success

Create Differentiated Care Pathways to Match Different Student Needs



CYBERSECURITY INCIDENT HANDLING: A CASE STUDY OF THE EQUIFAX DATA BREACH

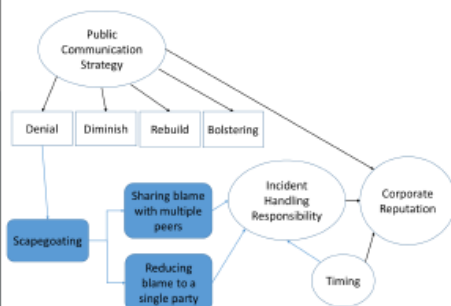
Ping Wang, SCIS, RMU
Christopher Johnson, PNC Bank



Introduction

This research paper studies the recent Equifax data breach using an improved version of business public communication model for cybersecurity incident handling. The adapted model highlights the scapegoating strategy often used in corporate crisis management. The study for this paper uses Equifax's official public release documents for text mining and analysis and evaluates the effectiveness of Equifax's incident handling strategies for the massive data breach in 2017.

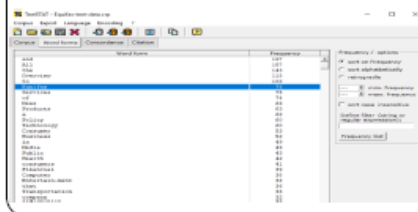
Figure 1. Data Breach Handling Model



Methods

- Case Study & Text Mining
- Case: Equifax data breach 2017
- Data: 3 Equifax public releases
- Text mining software: TextSTAT
- Analysis: Keyword frequencies
- Focus: non-accessory keywords
- Frequency → image projection

Figure 2. TextSTAT



Case: Equifax Breach 2017

- A major credit safeguard
- Breach of +140 million in US
- Sensitive PII breached
 - SSNs & DoBs
 - Home addresses
 - Driver license numbers
 - Credit card info
 - Financial records/disputes
- Timeline
 - 3/8/17: US-CERT alert
 - 3/10/17: Breach begins
 - 7/29/17: Equifax detection
 - 7/30/17: Breach ends
 - 8/2/17: FBI engaged
 - 9/7/17: 1st public release
 - 9/26/17: CEO retirement

Results

Table 1. Top Keyword Frequencies (High-Low)

Keyword	Frequency	Percentage
Consumer(s)	94	12.10%
Equifax	76	9.78%
Services	75	9.65%
News	66	8.49%
Products	63	8.10%
Policy	60	7.72%
Technology	60	7.72%
Business	52	6.69%
Media	49	6.30%
Public	43	5.53%
Health	42	5.40%
Financial	39	5.02%
People	30	3.86%
Security	28	3.60%

Total Top Occurrences = 777

Analysis of Findings

- Consumers (#1) & Equifax (#2) → Top priorities
- {Services, Products, Policy, Business, Tech, Health, Financial, Security} = 63.71% → Appeal to topics of public interest
- {Consumers, Public, People} = 21.49% → Directly address public audience
- {News, Media} = 14.80% → Awareness/acknowledgement and non-avoidance of media

Conclusions

- Scapegoating/Denial Strategy:
 - No blame sharing with peers
 - Reducing blame: CEO took "full responsibility" & retired
- Rebuild strategy:
 - Apologies & credit monitoring (+)
 - Twitted a phishing link 4 times (-)
 - Worst Web portal password
- Timing factor:
 - 6-week delay in disclosure (-)
 - 3 executives sold shares before official disclosure of breach (-)
- Performance Measures:
 - Equifax stock value down 14% after initial press release
 - 23 class action lawsuits followed; cost estimate in hundreds of millions of dollars
 - Independent assessment of incident handling: "public relations catastrophe" (Wiener-Bronner, 2017).

Presentation of The Study

58th Annual IACIS Conference
October 3-6, 2018
Clearwater Beach, Florida

Publication of The Study

Issues in Information Systems
Volume 19, Issue 3, pp. 150-159, 2018

CYBERSECURITY INCIDENT HANDLING: A CASE STUDY OF THE EQUIFAX DATA BREACH

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Optimization of Advanced High Strength Steels

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Figure 1: Thermomechanical Processing of Steels.

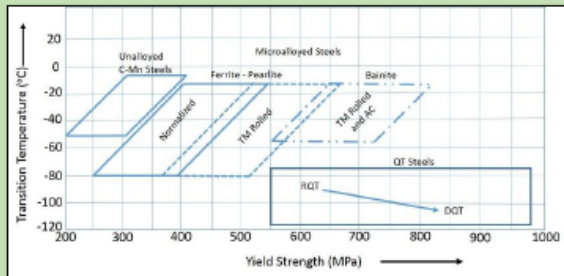


Figure 2: Property and Toughness Envelop.

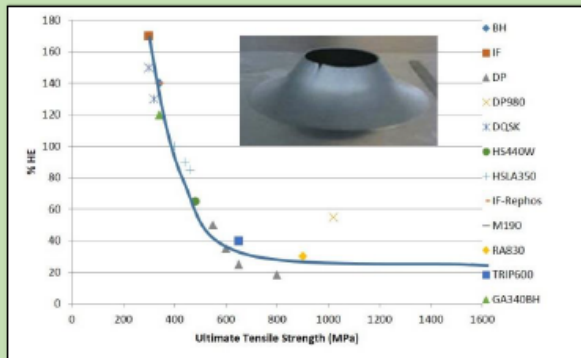


Figure 3: Effect of Strength on Steel Formability.

Problem Statement: Modern automobiles demand steels with ever increasing envelope for properties and performance due to increasing industry standards for fuel efficiency, vehicle safety, crash worthiness, emission control, formability, manufacturability, durability and quality – all of the above to be achieved at lowest cost. Therefore several alloy design and hot processing strategies must be employed to meet such often contrasting expectations. In the present study, some results of alloy design and process optimization are presented.

Steel properties - a wish list:

- High Strength – yield and tensile → Light weight car, more fuel efficiency (see Figure 2)
- High Toughness – impact transition temperature, higher upper shelf energy → crash resistant, safe car (see Figure 2)
- High Formability → easy to make, improves manufacturability, complex shapes (Figure 3)
- Low Spring-back → keeps the shape after forming, better fits and tolerances
- High weldability → improved manufacturability
- High Fatigue Resistance → improved durability and higher reliability
- Increased Corrosion Resistance → improved durability and higher reliability
- **Optimization Problem:** need to do all of the above at the lowest cost!

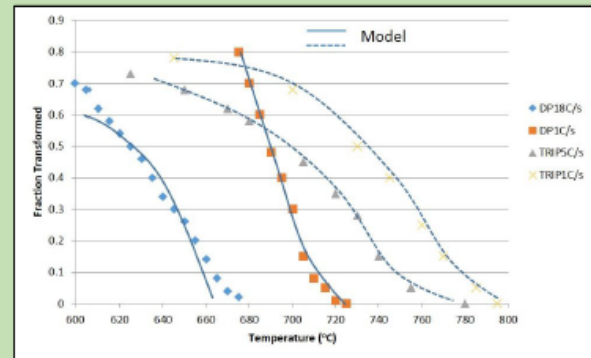


Figure 4: Effect of Cooling Rate on Transformations.

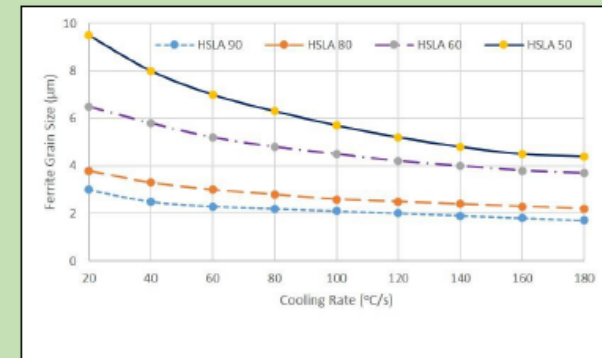


Figure 5: Effect of Cooling Rate on Grain Size.

Conclusion: A judicious combination of solution strategies must be deployed for this complex optimization problem. These strategies include alloy and micro alloy design, thermomechanical processing, phase transformations (see Figure 4), austenite and ferrite grain size (see Figure 5), post deformation cooling (see Figure 1), specialized heat treatments, precipitation, and retained austenite content.

The Social and Cultural Impacts of Community Gardens and Their Overall Effects on Tourism and Planning



Dr. Richard Mills, SBUS



Key words: Community Garden, Educational Gardens, Tourism Gardens, Tourism Planning Urban Development, Health and Wellness

Introduction

The Social and Cultural Impacts of Community Gardens and Their Overall Effects on Tourism and Planning. In addition to expediting food and promoting agro-tourism many community gardens that are associated with the tourism industry can produce fresh produce to individuals, community food banks and families attempting to pursue a platform for a nutritious based lifestyle that will lead to a positive based health behavior change. While community gardening is undergoing a resurgence, there is a strong need for evaluation and understanding on how and why the community garden industry has such a significant impact on the social and cultural effects on tourism and urban planning industry. This research advances the most current trends and models regarding the community garden industry to show how these gardens are being implemented throughout the world as a tourism segment that impacts both social and cultural health and wellness lifestyles.

Methods

This Research was conducted in an ethnographic form. The research was collected by visiting Dublin Ireland in the month of August 2018. The author visited several gardens throughout the 10 day stay during tourism stops to the Blarney Castle, The tourism visitors center at the Trinity college Dublin and finally a stop at restaurant Patrick Guilbaud Dublin. Upon return to the USA the author compared the popularity of garden visits in Ireland to his own ownership of Rosslea Farms a community garden and event center.

Results

The research shows how popular community gardens, agro-tourism and tourism play in relationship to sustainable tourism planning. Gardens, farming, and tourism are extremely in demand world-wide as evidence in tourism visits and overall destination and travel planning continue to grow. The fresh green gardens and the flavor of food will continue to thrive. Gardens are in our public places, our communities and even our homes. This research shows how a simple garden can attract thousands upon thousand of people over time in order to gain overall pleasure for food and happiness in life



Dublin Tourist Garden



Dublin Tourist Garden



Roselea Farm Garden



Roselea Farm Garden



Dublin Tourist Garden

Conclusions

Community, Outreach, Quality of Life, Gardening
The sustainable practices in farming and community gardens and tourism planning ultimately affect the entire community: farmers, tourism destinations and consumers share in the rewards of sustainability and community gardening. A Midwest farmer works closely with the local university, cooperating on a research project on organic conversion. A tourist visits a garden on a tour in another country. This practice is growing throughout the world as farmers, universities, and consumers reap the benefits of sustainability in agriculture and community gardening and tourism enhancement.



Roselea Farm Garden

What do Online Programs Need to be Successful?

The Staff of RMU Online



Introduction

While many schools are experiencing a downward trend in enrollment numbers, the number of students taking online courses continues to rise (Seaman, Allen, & Seaman, 2018). With more savvy learners, students are requiring more from their online classes and more from the services they can utilize (Kelly, 2017). This poster shows how RMU is meeting those needs.

Student Services

Each RMU Online student is assigned to one of our Online Student Services Representatives for a personalized experience. As a RMU Online Student, your Online Student Services Representatives will: be your coach, friend, and mentor, design, in conjunction with your academic advisor, your class schedule for your time at RMU, personally register you for all of your courses, assist you with staying on track for graduation, assist with any online learning issues.

Career Services

According to the Kelly (2017) article, online students desire a University that can cater to their career goals and provide assistance in this area. RMU has a dedicated Career Coach that works with students on resume building, cover letters, and job searches.

Services for Students

WELCOME TO RMU!

ONLINE ORIENTATION
CLICK TO VIEW

24/7 HELP DESK

smarthinking
Live, Online Tutoring - 24/7

- Dedicated guide for registration
- New Student Orientation
- 24/7 Help Desk
- 24/7 Tutoring by Smarthinking
- RMU Online Communication and Resource Center



Growth Through Membership

- Attend the OLC Accelerate Conference
- Utilize the OLC Quality Scorecard to continue improving services for students.
- Attend the National Symposium on Student Retention to stay current on retention needs

IDFS

Instructional Design and Faculty Support Services (IDFS) is made up of three instructional designers. The designers partner with faculty to create fully-online courses utilizing content that faculty teach on-ground. It is also the job of this team to assist with the selection of technologies to best fit the pedagogical requirements of the assessment selected. Additionally, this team puts together a training calendar each semester to keep faculty up-to-date on emerging technologies and trends in online learning.

Professional

Development for Faculty

Each semester, the IDFS team leads a series of workshops to enhance the skills of faculty teaching online. Topics covered over the past terms include:

- Rubrics
- Grade Center Utilization
- Narrated Lectures in PowerPoint
- Collaborate Ultra
- Date Manager

Design Standards

Based on one of the foundations of Quality Matters, the IDFS team seeks to identify proper alignment to ensure that course objectives and program goals are met.

Weekly Learning Objectives	Readings & Resources	Assessments
Course Objective 1: Recall leadership theories and concepts.		
WLO1: Define 3 elements of leadership.	The Art of Leadership - Chaps. 2 and 3 (30 pp)	Week 2 Discussion, Week 3 Writing Assignment
WLO2: Analyze the importance of ethics in establishing an ethical leadership philosophy.	The Art of Leadership - Chap. 6 (24 pp)	Week 3 Writing Assignment
WLO3: Outline the roles of ethics in leadership.	The Art of Leadership - Chaps. 6, 24 (24 pp)	Week 3 Writing Assignment
WLO4: Compare leadership theories.	The Art of Leadership - Chaps. 6, 24 (24 pp)	Week 3 Discussion, Week 3 Writing Assignment
WLO5: Understand how concepts related to practice apply in real-world, emerging environments.	Articles: Working Leadership - The ethics issue (24 pp)	
Course Objective 2: Explain behaviors of leaders vs. behaviors of managers.		
WLO6: Explain why leadership is important.	The Art of Leadership - Chaps. 1, 2 (24 pp); The Art of Leadership - Chaps. 2 (24 pp)	Week 1 Writing Assignment, Week 1 Writing Assignment
WLO7: Compare and contrast behaviors leading to change.	The Art of Leadership - Chaps. 1, 2 (24 pp)	Week 1 Discussion, Week 3 Writing Assignment, Week 3 Writing Assignment
WLO8: Compare characteristics of negative leaders.	The Art of Leadership - Chaps. 2 and 3 (30 pp)	Week 1 Writing Assignment, Week 1 Writing Assignment
WLO9: Compare leadership styles and their impact on organizational success.	Articles: Working Leadership - The ethics issue (24 pp)	

Educational Technology

Additionally, the IDFS team serves as a partner in the selection of educational technology for faculty. In recent times, faculty have implemented the following technologies:

- EdPuzzle
- Screencast-O-Matic
- Canva
- Advanced PowerPoint

Course Map for Development

Week/Topic/Title	Learning Objectives	Readings & Resources	Overview/Assignments	Instr. Time	Points
Factor Affecting International Logistics	(1) Understand and apply INCOTERMS to international transactions. (2) Analyze trade agreements to determine what benefits they offer to exporters and importers. (3) Understand trade quotas; strategically apply quotas to a company's benefit.	(1) Incoterms Explained https://www.incoterms.com/2010/01/01/2010-incoterms-explained/ (2) US Regional Trade Agreements https://www.tradebalance.com/us-regional-trade-agreements-2016-07/ (3) Congressional Budget Office Assessment of US Trade Agreements (PDF)	Weekly Overview: International transactions can be affected by numerous factors. Foremost among these factors are INCOTERMS. These contractual terms of sale determine each party's responsibility and risk during an international transaction. Failure to fully understand INCOTERMS can obligate the unprepared to additional costs and risks. Trade agreements and quotas can also impact international trade. We review these and examine how they can be used strategically in a well-timed international supply chain. Discussion: President Trump is on record calling NAFTA "the worst trade deal ever." In general, his Administration has shown no ability to trade agreements. What do you think? Should we pull the US out of all or some of the existing trade agreements? Discussion: Assignment: INCOTERMS exercise - paired negotiation. Students will be given a scenario and designated as either the exporter or the importer. They will then have to negotiate the contractual terms of sale (i.e., the INCOTERMS) under with the merchandise will move.		
TOTAL TIME AND POINTS					



RMU Wellness Center at Center for Hope

Terri Devereaux, PhD, FNP-BC, Janice Sarasnick, PhD., RN, CHSE, CHSOS, Luann Richardson, PhD., FNP, GNP, PMHNP, FAANP, Jason Dorich, BRN, RN
Robert Morris University, SNHS



Introduction

- A collaborative program between Center for Hope (CFH) and Robert Morris University (RMU) is to help the underserved clients of CFH obtain the medical care they need by implementing a Wellness Center.
- The Center for Hope is a 501©(3) ecumenical, faith-based charity located in and serving the low-income population of Ambridge, PA. Their mission is "To help our Ambridge neighbors in need to break the bonds of poverty, and lead independent lives." They offer programs that help each client develop his/her body, mind, and spirit.



Goals

1. To promote health and wellness of clients through navigation assistance in order to access the appropriate level of care (Current evidence suggests that providing access to appropriate care decreases emergency room visits and cost to the community).
2. To provide RMU nursing students experience working in a community health center (RMU BSN and DNP students will gain invaluable experience providing care to a diverse and underinsured population, therefore providing contextual learning opportunities to address the social determinants of health).
3. To develop a program for other food pantries and community centers to emulate (This cost-effective model for promoting health and wellness at community centers during food pantry hours has the potential to be modeled by community centers across the nation).
4. To develop outcomes based data that demonstrate the efficacy of this approach in meeting community health needs.



Results

1. Improved access to care for this underserved population
 2. The establishment of evidence-based practices for collaborative teams and care coordination
 3. Experiential clinical opportunities for doctorate nurse practitioner students to apply best practices.
 4. Additional opportunities for undergraduate nursing students to provide educational presentations.
 5. Benchmark data will be collected that will include number of clients seen, number of DNP students and hours spent doing triage and initial evaluation of clients with faculty supervision, number of BSN students and hours spent providing educational sessions at the Center, and the number of health promotion and educational presentations given. This data will be collected, analyzed and disseminated to appropriate members of the healthcare team.
1. Number of clients accessing the Center, expecting to see an increase.
 2. Number of clients accessing the ED, and expect to see a decrease.
 3. Number of clients attending educational programs, and expect to see an increase.
 4. Survey patients to assess their satisfaction with the healthcare provided, and expect to see satisfaction.
 5. Health outcomes, such as noting better self-care and better management of chronic diseases such as diabetes, asthma, and vascular disease to name a few, and expect to see improvement.
 6. Number of hours doctorate and undergraduate nursing students spend at the Center to assure that they are receiving the planned clinical experiences they need.
 7. AqoL-8D (clients) and T-TAQ (students) survey pre/post will be used to evaluate program
 8. Financial expenses to assure that there are funds to continue the Center after the three-year grant period expires.

Conclusions

A Collaborative Nurse-Led Wellness Center for the Underserved and the Effect on Client Perception of Health, Participation in Healthcare, and the Team Members' Perception of Quality of the Team

Terri Devereaux, PhD, FNP-BC (SNHS), Janice Sarasnick, PhD., RN, CHSE, CHSOS (SNHS), Luann Richardson, PhD., FNP, GNP, PMHNP, FAANP (SNHS), Jennifer Marth BSN, RN, BMTCN (SNHS)
 Robert Morris University (SNHS) & Center for Hope (CFH)



Introduction

The cornerstone of new models of healthcare is the quadruple aim, providing individual and population healthcare cost-effectively while improving the patient and clinician experience^{1,2}; and the Chronic Care Model, connecting all available resources to optimize care^{3,4}.

To change the delivery of care, healthcare professionals need to have the skills and confidence to deliver care in new settings. To that end, educational programs must evolve to encompass interprofessional and community-based opportunities.

A novel nurse-led wellness center for the underserved at Center for Hope (CFH) in Ambridge will be implemented to:

- Improve underserved populations access to care.
- Operationalize evidence-based practices for collaborative teams and care coordination.
- Provide experiential clinical opportunities for undergraduate nursing students and clinical doctorate nurse practitioner students to apply best practices.

Methods

A quasi-experimental pre/post design will be conducted to determine if there is evidence that the implementation of a collaborative nurse-led wellness center for the underserved improves clients' assessment of their own physical and psychosocial health, their participation in their healthcare, and the team members' attitudes of the quality of the team.

Sample

- Convenience sample of clients at CFH in Ambridge who visit the Wellness Center.

Intervention

- A collaborative model for the wellness center has been developed using EB concepts for practice and education. Team members will include the client, DNP and BSN faculty and students, CFH director, and Primary Health Network (PHN) coordinator and clinician. Representatives from community resources will also be accessed and coordinated as needed by the client's individual care plan.
- A QoL-8D survey will be used to assess participants' health related quality of life pre and 3 months post accessing the Wellness Center.
- T-TAQ questionnaire will be used to assess team members' perceptions of the quality of the team and to identify areas to improve team performance.

Data Analysis

RQ 1: Does the implementation of a nurse-led wellness center improve client perception of his/her health as rated by the AQoL-8D scale?

Independent Variable	Dependent Variable	Statistical Analysis
Nurse-Led Wellness Center	Client Perception of quality of physical and psychosocial health	Paired t test Type I error rate = 0.05
Correlation No Independent Variable	Physical health Psychosocial health	Pearson Correlation Coefficient

RQ 2: Does the implementation of a nurse-led wellness center improve the client's participation in care for his/her health as rated by:

- Adherence to follow up visits
- Follow-up care with health care entities (i.e. PHN, Catholic Charities, specialist referrals and screenings)

Independent Variable	Dependent Variable	Statistical Analysis
Nurse-Led Wellness Center	Attendance at wellness events and screenings: • Adherence to visit follow up • Wellness screenings • Other health care entities (PHN, Catholic Charities, Specialist referrals)	Test of independent proportions

RQ 3: What are the team members' attitudes regarding the teamwork among all care providers and the community administration as measured by the T-TAQ tool?

Independent Variable	Dependent Variable	Statistical Analysis
Collaborative Team model at Nurse-Led Wellness Center	Team member perception of quality of collaborative team	Paired t test Type I error rate == 0.05

Conclusions

Wellness Center at Center for Hope scheduled to open Summer 2019



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Design Thinking Approaches to Addressing Concussions in Female High School Soccer Players (Pilot Study)



Southwestern Pennsylvania Engineering Outreach Program (SPEO) - Funders

Woodrow W. Winchester, III, PhD, Rika Wright Carlsen, PhD, and Danielle Holmes – Investigators (SEMS)

Introduction

Within the context of this semester's offering of ENGR2500, this study pilots the development of a portable educational module that introduces design thinking as a means to engage female high school students in engineering through demonstrating its social relevancy and impact.

Figure #1



In the pilot study, students learned about the biomechanics of concussions.

Methods

Student teams are using design thinking as an approach in translating gained technical insights on the biomechanics of traumatic brain injuries (TBIs) into product concepts that address concussion awareness and prevention specific to female high school soccer players. At pilot completion, **lessons learned will be identified and incorporated into an educational module to be used in RMU's 2019 Inspiring High School Girls through an Injury Biomechanics Summer Camp.**

Figure #2



Students were exposed to various tools and methods for brainstorming and prototyping.

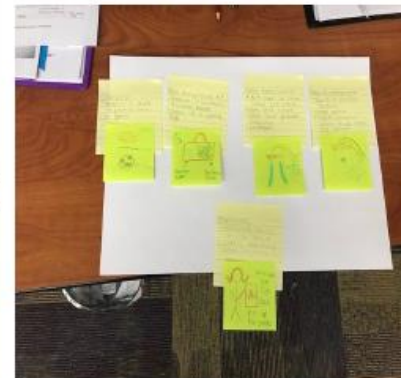
Results

Figure #3



Brainstorming (Sample)

Figure #4



User Journey Maps (Sample)

Conclusions

As an outcome of formative evaluations with Samantha (Sam) Powell, RMU Athletic Trainer and other identified stakeholders, student teams are currently refining their concepts in preparation for final prototyping and presentation.

Figure #5



Student teams engaging with stakeholder representatives.

Thanks

Special thanks to Samantha (Sam) Powell, RMU Athletic Trainer and Keirsten Vanhorn, RMU Women's Soccer, for their valuable insights and perspectives.

The Geographic Concentration of Industry: Do State Taxes Matter?

Zhou Yang, SESS



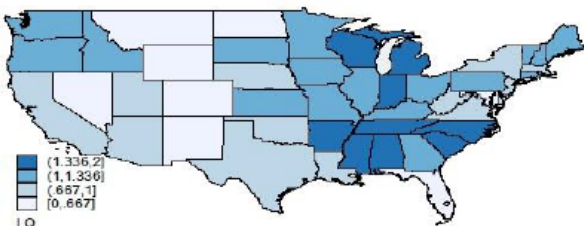
Abstract

Using a dynamic panel data model, this paper explores the effects of state tax policy on the geographic concentration of industry. The results suggest that state taxes have differential impacts on the degree of geographic concentration across industries. Tax policy matters for manufacturing, wholesale trade, and retail trade industries, but responses to changes in specific elements of the tax policy differ across industries. The findings have important policy implications and help policymakers better target their economic development efforts.

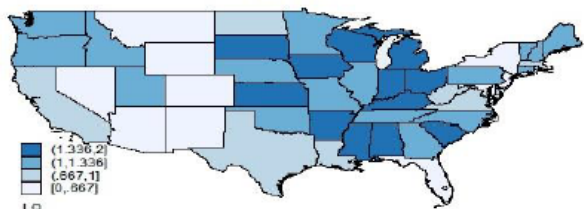
Motivation

- **Business Location Choices**
 - Existing studies have shown that taxation affects business location choices.
- **Agglomeration and Tax Policy**
 - Are such impacts strong enough to affect the spatial distribution of industries?

Figure 1: Concentration of Manufacturing Jobs
1998



2014



Purpose of the Paper

- **Fill a Gap in the Literature**
 - Examine the effects of state taxes on the geographic concentration of industry
 - Explore the impacts by employment change status

Research Methods

- **Empirical Methodology**
 - Dynamic panel data model with fixed effects

$$GC_{it} = \alpha_0 + \rho GC_{it-1} + \beta' Tax_{it-1} + \theta' X_{it} + Y_t + u_i + v_{it}$$

GC_{it} : geographic concentration of specific industry;

Tax_{it-1} : vector of state tax variables;

X_{it} : economic and geographic controls;

Y_t : year fixed effects;

u_i : state fixed effects

- **Data**
 - Measures of geographic concentration
 - Location quotient (LQ)
 - Two sets of LQs at the state level
 - LQs based on employment
 - LQs based on number of establishments
 - Four sets of LQ-type measures by employment change status
 - Establishment births, deaths, expansions, and contractions

Results Summary

- **Effects of Corporate Income Taxes (CIT)**
 - Lower concentration of manufacturing industry in states with throwback and addback rules
 - Lower concentration of retail trade industry in states with combined reporting requirement
 - Lower concentration of wholesale trade industry in states with higher CIT rates
- **Effects of Other State Taxes**
 - Higher concentration of manufacturing and retail trade industries in states with lower sales tax rates
 - Higher concentration of wholesale trade industry in states with lower personal income tax rates

Conclusion

- Policies intended to raise state CIT revenue reduce the concentrations of manufacturing, wholesale trade, and retail trade industries, but responses to specific elements of state CIT tax policy are different across industries.
- The impacts of state CIT on the geographic concentration of industry establishments with employment changes differ across industries.
- Effects of state sales and personal income taxes vary across industries.
- Tax incentives can be used as a way to foster clusters of targeted industries.

32 Posters were Presented!