



Celebration of Scholarship Poster Workshop

March 11, 2015

Dolan A202/203

Presented by:

- Cathy Anson, Advisor to the Celebration
(Director of Sponsored Research)
- Dr. Erin Johnson, Honors Program Advisor
(Assistant Professor, Biology)



**A CELEBRATION
OF SCHOLARSHIP**

JOHN CARROLL UNIVERSITY

Teach • Discover • Integrate • Apply

Poster Session: April 13, 2015

- Session starts at 5:30 PM; ends at 7:00 PM in Dolan Atrium
- Participant Reception: 5:00 to 6:00 PM in the Dolan Reading Room



**A CELEBRATION
OF SCHOLARSHIP**

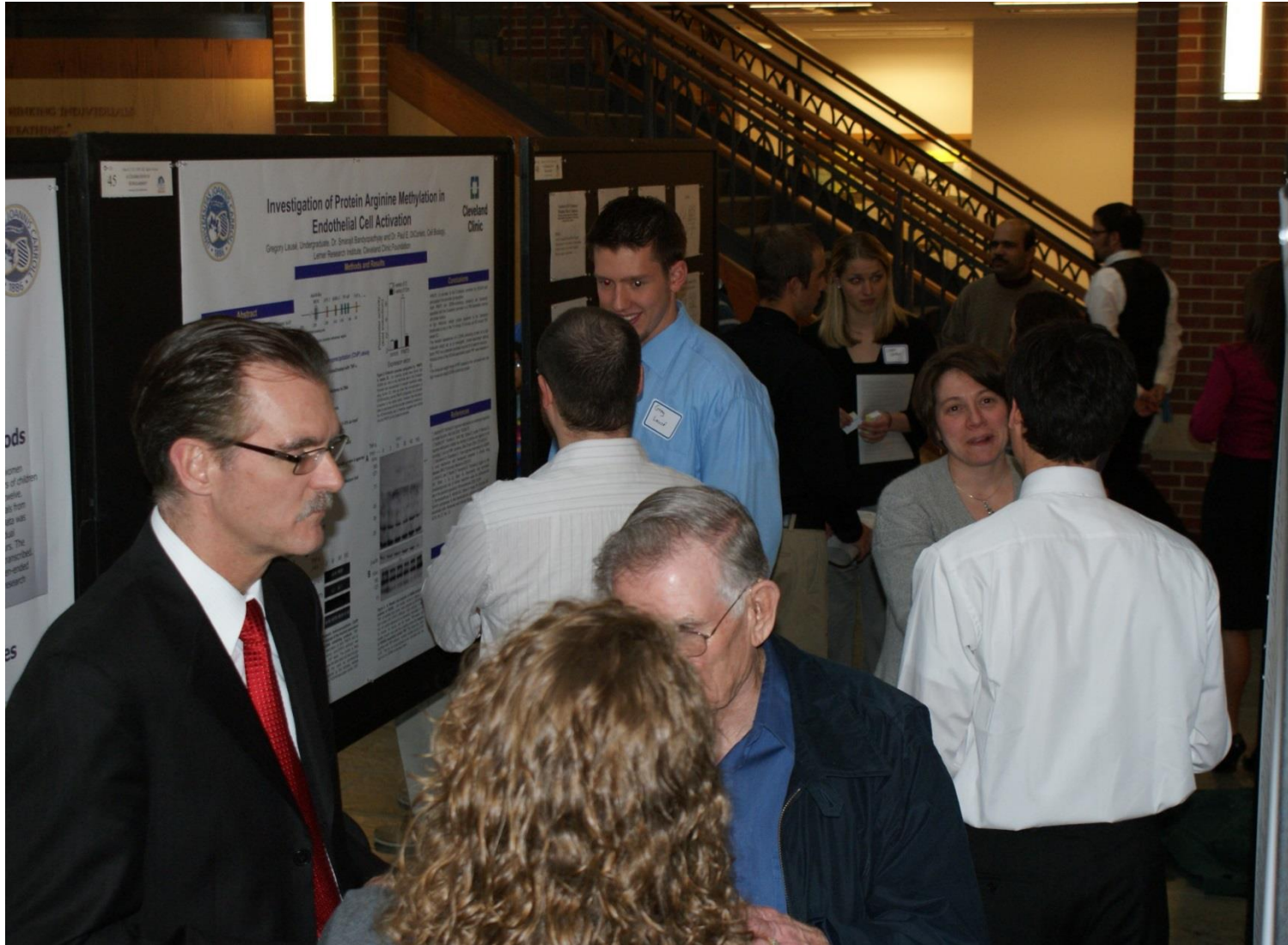
JOHN CARROLL UNIVERSITY

Teach • Discover • Integrate • Apply



Poster Session: April 13, 2015

- Posters available in Dolan Atrium by noon
- Hang your poster by 5:15 PM according to your poster number
- Push pins available in the Atrium
- Leave your poster up until Thursday afternoon
- Poster stands will be picked up Friday morning



What to Expect

- Dress professionally
- Wear your name tag (available day of show)
- Stand by your poster for the entire time (5:30 to 7:00 PM)
- Interact with visitors
- Present a short overview of the project (~3 minutes)
- Be prepared to answer questions

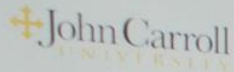
Creating Your Poster!

Old Style Posters: 2005



Old Style Posters: 2005





Explorations on Data Breaches, Identity Theft, and Information Security

Lester Eliazo, Undergraduate; Advisor: Dr. Linda Seiter, Mathematics & Computer Science



Abstract

Since the early 2000s, data breaches in the United States, amounting to 350 million records, have become a common occurrence. This study shows that organizations from all sectors and industries, and people from every walk of life, have been affected, in some way, by data breaches. This study also shows that organizations are significantly more prepared than the public. Nevertheless, by knowing the methods used, such as social engineering and phishing, the occurrence of data leaks and fraud can be reduced. Furthermore, by utilizing encryption and hash functions on the databases where sensitive information is stored, the impact of data breaches can be limited and identity theft prevented.

Introduction

With the continued growth of the Internet, the spread and interconnectedness of information is faster than ever before. Technology, people and online experiences using the Internet for activities such as shopping, banking, filing tax returns, and registering to vote, among others, with each interaction being stored in some kind of database. Even if one does not directly access the Internet or connect with an organization, some basic data, like organization will get that information in digital form in a database for its record-keeping systems, because digital information is easier and more cost-effective to organize, store, and manipulate than a paper file.

The value of information is immeasurable. Taken as a whole, information within companies and organizations provides a financial history and insight for their needs. In a smaller scale, those who need to use information for individual purposes value our use of data for a single project or even individual pieces of data, as they can look to more information, having the most desired pieces of information are financial history, transcripts (GPA) and credit card numbers (CCN). Coupled with basic information such as the first name, last name, address, and date of birth of a person, which may be taken from the same database or which may be readily available online, identity thieves can assume another's identity in order to commit fraud. By possessing such information, using someone else's CCN allows one to purchase items, identify the bank. Furthermore, the ubiquitous nature of the SSN as an identifier allows an identity thief to set up their accounts in someone else's name, get medical benefits, or open an another person when being approached by a crime by going to ID that has someone else's information and then showing up the same. All these can be done with one person's identity, so it is not the amount of effort, which goes through in get such information.

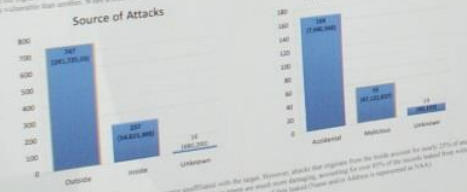
Data Breaches

To get a sense of the breadth for the prevalence and potential of identity theft, one need look no further than the the majority of data breaches that have occurred through the last seven years where personal information has been compromised. These organizations that maintain a list of data breaches are the Data Breach Forecaster (DBF) and the Privacy Rights Clearinghouse (PRC). The DBF is a non-profit public organization founded by information security professionals. One of their services is maintaining a comprehensive regularly updated list of "Data Breach Forecaster" which is a collection of data breaches with variable information including the company and the date of the breach. The PRC is a non-profit consumer protection organization, in another instance, that maintains a list of data breaches that have been reported to the United States. Because the two of them, would use the format of the same data breach (i.e., who, what, and how) and the depth of each week 15, the number and the type of people's information that was compromised is comparable to the other's, with the exception of the date and the source of the breach. By comparing the two organizations, the reliability of the data breaches, using the list provided by the DBF (as of October 2018), comparing to the list provided by the PRC, will be used to assess the number of records leaked in a particular, with following was observed for data breaches in the United States, starting with what sector the data breaches occurred and then showing up the same. All these can be done with one person's identity, so it is not the amount of effort, which goes through in get such information.

Incidents by Sector



Inside Source Breakdown



Top 10 Data Types Leaked



An expected, the SSN and CCN are the most leaked, respectively. The most common information where compromised, the SSN with the SSN and the CCN with the SSN. Although most of the breaches are considered, those that are most likely to be affected by these breaches include: health care, education, and government. A total of 144,247,241 records were leaked, with 11,197,642 records being leaked in a single breach. The most common type of breach is a data breach, with 11,197,642 records being leaked in a single breach. The most common type of breach is a data breach, with 11,197,642 records being leaked in a single breach.

Causes of Data Breach

Cause	Description	Number of Incidents	Percent of Total
Human Error		210	23.1%
Malware		105	11.5%
Insider Threat		85	9.2%
Phishing		75	8.2%
Denial of Service		65	7.1%
Software Vulnerability		55	6.0%
Third-Party Breach		45	4.9%
Physical Security Breach		35	3.8%
Insider Threat (Malicious)		25	2.7%
Insider Threat (Negligent)		25	2.7%
Insider Threat (Accidental)		25	2.7%
Insider Threat (Unintentional)		25	2.7%
Insider Threat (Malicious)		25	2.7%
Insider Threat (Negligent)		25	2.7%
Insider Threat (Accidental)		25	2.7%
Insider Threat (Unintentional)		25	2.7%
Insider Threat (Malicious)		25	2.7%
Insider Threat (Negligent)		25	2.7%
Insider Threat (Accidental)		25	2.7%
Insider Threat (Unintentional)		25	2.7%

Protecting the Data

The use of the identity theft is often a combination of several factors. It is not always a single factor, but a combination of several factors. It is often a combination of several factors, such as a combination of social engineering and phishing, or a combination of social engineering and phishing, or a combination of social engineering and phishing. It is often a combination of several factors, such as a combination of social engineering and phishing, or a combination of social engineering and phishing, or a combination of social engineering and phishing.

ICU Member Management System

The ICU Member Management System is a web-based system that allows users to manage their membership information. It includes features such as user registration, login, password management, and profile management. The system is designed to be secure and user-friendly.

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Lester Eliazo



Template Available

- On the Celebration web on the [Poster Guidelines](#) page
- Print your poster for free through ITS
 - Celebration cover the cost to print in color on plain paper. You can pay to have your poster printed on glossy paper.
 - Deadline to send to ITS: **Wednesday, April 8, 2015**

Title

Author(s) and Affiliation(s)

Abstract / Lit Rev
Introduction /
Background

Purpose /Argument
Research Question
/ Objectives

Methods /
Study Design

Methods /
Materials

Analysis /
Discussion

Graphics/Tables/
Images

Key Results /
Findings /
Significance

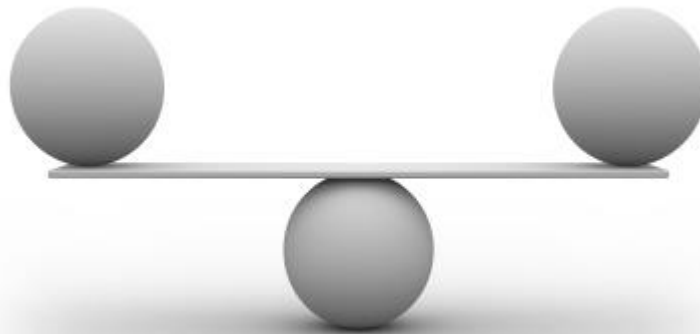
Conclusion /
Recommendations
/ Future Directions

Selected References/
Acknowledgements

Refining Your Story

- What do you want your audience to remember?
- How can you condense the entire project into a few key points?
- What should be emphasized?
- What can remain in the background?

Layout, Style & Format



Identification of the Cell of Origin for Wnt Pathway-Associated Medulloblastoma

Yanxin Pei and Robert Wechsler-Reya

Department of Pharmacology & Cancer Biology, Duke University Medical Center, Durham, NC.

ABSTRACT

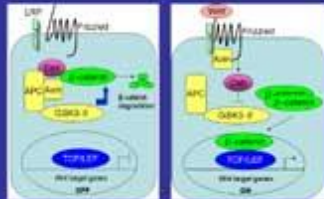
Wnt pathway mutations have been found in cerebellar medulloblastomas, the most common malignant brain tumor in children. However, the cell type that is transformed by aberrant Wnt signaling remains unknown. Our goal is to identify this cell and use it to develop models for Wnt pathway-associated medulloblastomas. To do so, we are developing strategies that will allow us to label Wnt-responsive progenitors in the cerebellum. These cells will be isolated and tested for their ability to be transformed by Wnt pathway activation. In addition, many human medulloblastomas express the transcription factor Neurogenin-1 (Ngn1), raising the possibility that Ngn1+ cells might represent a cell of origin for these tumors. We have used the Ngn1 promoter to drive expression of β -catenin in Wnt pathway mutants *in vivo*. These mice have smaller cerebella and exhibit defects in cerebellar development. Ongoing studies will determine whether prolonged activation of Wnt signaling in Ngn1+ cells is sufficient to cause medulloblastoma. Finally, we have observed that CD133+ neural stem cells proliferate in response to Wnt pathway activation *in vitro* and following injection into the cerebellum. In future studies we will test whether these cells can form tumors following transplantation. These studies will provide important insight into the cellular and molecular mechanisms of medulloblastoma.

BACKGROUND

Medulloblastoma is the most common malignant brain tumor in children. It has been divided into two major subtypes based on histological and molecular characteristics: "classic" medulloblastoma and "desmoplastic" medulloblastoma. The cell of origin is not clear for either subtype but some studies suggest that the former may originate from multipotent progenitors in the ventricular zone of the cerebellum, while the latter may originate from granule cell precursors in the external germinal layer (EGL). Recent studies have suggested that the Sonic hedgehog/Patched signaling pathway plays a critical role in regulating the proliferation of granule cell precursors and is also a major target of mutation in desmoplastic medulloblastomas. However, the pathogenesis of classic medulloblastoma remains unknown. Some findings suggest that the Wnt- β -catenin signaling pathway is activated in a subset of these tumors. Understanding of the role of Wnt pathway in tumor formation may shed light on the etiology of classic medulloblastoma.

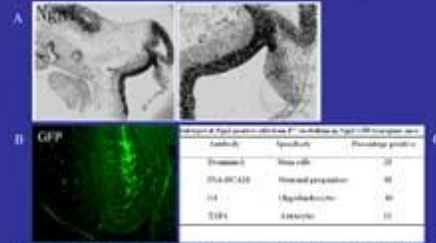
Wnts are secreted proteins that have been implicated in many developmental processes including cell fate specification, proliferation and differentiation. Wnts activate target genes through β -catenin, one of the key downstream effectors in the Wnt signaling pathway. Activating mutations in β -catenin (Ctnb3) have been identified in 3-10% of sporadic medulloblastomas. In addition, mutation of Wnt1 results in the loss of midline-brain boundary, from which the cerebellum arises. Thus, Wnt- β -catenin signaling plays a critical role in the development of cerebellum and formation of medulloblastoma.

Although Wnt- β -catenin signal activation can induce cell proliferation and tumor formation, the role is cell-type dependent. Our goal is to identify the cell of origin for Wnt signaling pathway in the formation of medulloblastoma.



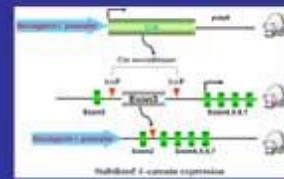
Wnt signaling pathway. Wnts activate expression of target genes through β -catenin which is an essential component in the Wnt pathway. In the absence of Wnt signaling, β -catenin is in a complex with Axin, APC and GSK3- β , and gets phosphorylated and subsequently degraded by proteasomes in the presence of Wnt signaling, β -catenin is uncoupled from the degradation complex and translocates to the nucleus, where it binds TCF/LEF transcription factors, thus activating target genes.

1. Expression of Neurogenin I (Ngn1)



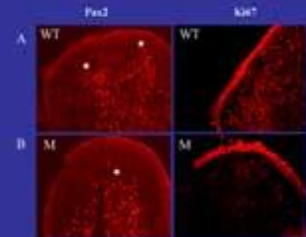
Expression of Ngn1 in a subset of cerebellar progenitors. (A) *In situ* for Ngn1 in E11 sagittal brain. High power view in right part of A. Ngn1 is expressed in the ventricular zone. (B) Sagittal sections of P0 Ngn1-GFP transgenic mice were stained with GFP. Ngn1 is expressed in cerebellar progenitors in the white matter. These cells are candidates for the cell of origin of Wnt pathway-associated medulloblastoma. (C) Ngn1+ cells were stained with neuronal or glial progenitor marker and analyzed by FACS.

2. Generation of mice in which β -catenin is activated in Ngn I positive Cells



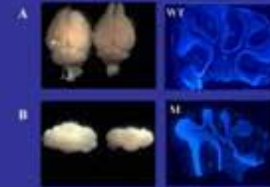
Stabilized expression of β -catenin under the control of Ngn1 promoter. The loxP-flanked F-oxal which contains phosphorothioate sites is recombined by Cre recombinase in Ngn1 positive cells. Thus, stabilized β -catenin enters nucleus and activates downstream target genes in Wnt signaling pathway.

3. E18 Cerebellum in Ngn1- β cat* Mice



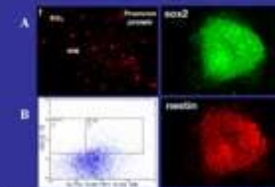
Migration and proliferation of cerebellum. Cerebellar sections from E18-day old. (A) WT, wild type (WT); (B) M, Ngn1- β cat* mouse (M). Sagittal sections were stained with Pax2, a marker of interneuronal precursors (A) (B) or Ki67, a marker of proliferating cells (C) (D). Note the location of Pax2 positive cells (asterisks) in the cerebellum in WT (A) and in M (B). These cells delay the migration in Ngn1- β cat* mutant cerebellum. However, the cells do not change the proliferation between WT and M in the cerebellum.

4. Generation of mice in which β -catenin is activated in Neurogenin-1+ Cells



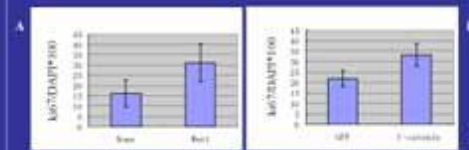
Ngn1- β cat* mice have defects in cerebellar size and structure. (A) The whole brain of 3-week old mice. Wild type (WT); left; Ngn1- β cat* mutant (M); right. (B) Cerebellum. WT; left; M; right. Sagittal sections of cerebellum were fixed and stained with DAPI (C), WT; (D), M.

5. Stem Cell Property of CD133 Positive Cells



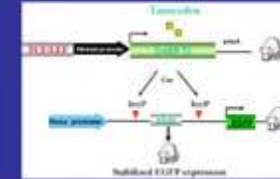
CD133 is expressed in cerebellar stem cells. (A) The cerebellar sections were stained with proteinase I antibody (also named as CD133). It shows that CD133 positive cells are located in the cerebellar white matter. (B) The cells from P0 cerebellum were stained with Proteinase and neuronal or glial lineage marker (M, PSA/NCAM or TAPI) and sorted by FACS. (C) CD133+ cells were cultured at clonal density in the presence of bFGF and EGF for 10 days. The cells formed neurospheres and expressed Sox2 (marker of stem cells) or nestin (neuroglial progenitors). A, C and D are from Andia, Lee et al. *Nature Neuroscience*, 2005.

6. CD133 Positive Cells Proliferate in Response to Wnt Signaling



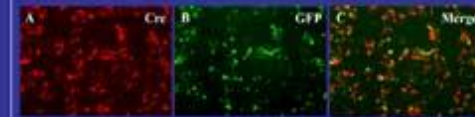
Proliferation of CD133 positive, lineage negative cells (CD133+, Lin-, CD133-). Cells were cultured in the presence of Wnt1 protein or proteinase (PSA/NCAM or TAPI) for 48 hours. The cells were fixed and stained with Ki67 and DAPI. (A) Wnt1 protein increased the proliferation of these cells compared with control. (B) β -catenin Δ cat increased the proliferation of CD133+, Lin- cells compared with control. Data represent means of six fields. \pm SEM and are representative of 3 experiments.

7. Generation of BAT-CreER Mice to Track the Fate of Wnt-Responsive Cells



Stabilized expression of EGFP under the control of TCF/LEF promoter. The CreER is a fusion of the Cre and bacterial tetracycline repressor. Adding Tetracycline causes the release of the Cre in the TCF/LEF positive cells. The loxP-flanked tag system is recombined by Cre and EGFP will be expressed. The Cre/EGFP reaction is reversible so that EGFP expression can be used to trace the fate of Wnt-responsive cells.

8. Bat-CreER Activation by β -catenin in 293T Cells



Cre Protein Expression in 293T Cells. 293T cells were transfected with β -catenin/TEF3-GFP and Bat-CreER plasmids. The cells were stained with Cre antibody (A, red) and examined for GFP expression (B, green). (C) Merge of A and B.

CONCLUSIONS

- Ngn1 is expressed in cerebellar progenitors during embryonic and early postnatal development.
- Overexpression of β -catenin in Ngn1 positive cells reduces the size of the cerebellum and causes defects in interneuron migration, but does not cause tumors (so far ...).
- Wnt1 protein and β -catenin virus can induce the proliferation of CD133 positive cerebellar stem cells.
- β -Catenin-infected stem cells are now being transplanted into the cerebellum to examine their tumorigenic potential.
- BAT-CreER mice will allow lineage-tracing of Wnt responsive cells in the cerebellum, and may identify new candidates for the cell of origin of Wnt-associated medulloblastoma.



The Beverly Beacon: A Woman's Newspaper
11/1/1913

...she is not capable, has never shown herself and never will show herself capable of sustaining alike the life of the family with all its profound and absorbing demands, and the laborious technique of public life.



Woman Suffrage is the opening wedge to Socialism and Feminism, propagandas antagonistic to everything held dear in Christian civilization.

A Slip of Paper in a Black Walnut Box: An Examination of the Suffrage Debate in Beverly, Massachusetts 1913-1915 Sarah Fuller, Bridgewater State University



4th of July Celebration, 1920, Dodge Street in North Beverly, Helen Wales and Beverly Dunham (L to R)

Thesis: By presenting never before analyzed primary source documents recently discovered in the archives of the local Beverly Historical Society in Beverly, MA, this study shines light on the local narrative, a missing piece of the state and national suffrage picture. Pro- and anti-suffrage women of Beverly, MA focused their attention on three major arguments: national economic changes and how these affected female responsibility within the home and family, whether or not female moral superiority had a role to play in politics, and finally, the social and political consequences that might result if women were allowed to vote.



...the hand of woman/a frail hand it is true/But it can rock the cradle and drop the ballot too...And though against that fragile hand/Distrust and doubt are hurled/Still, the hand that rocks the cradle/ Should help to rule the world.



Mary Boyden, *Anti Suffrage Secretary and Treasurer Records*, 1915

...the decline and fall of great nations and civilizations in our world history...three symptoms invariably attend the period of decay...the coming of women into public life and political prominence. This last factor...the fever of the diseased civilization.



If the polls are such vile, disorderly places as is claimed, then it is time woman purified them by her presence. Surely the affairs of state need to be conducted with decency and sobriety.

Are Technical Communication Graduates Prepared?

By Janmy Nguyen

Objective

To determine ways in improving the curricula of undergraduate technical communication programs and workplace communication by understanding the disconnection between the education of technical writers and workplace writing practices.

Methods

University Curricula

- Closely analyzed curricula from 7 universities in US with an undergraduate tech. comm. program.
- Content analysis of required curriculum and course descriptions pertaining to tech. comm.
- Compared/contrasted offered courses among all the examined universities
- Correlated courses to current job postings

Current Job Postings

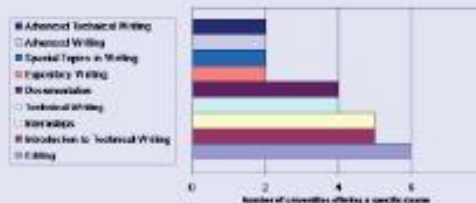
- Obtained 20 job postings in
 - software documentation,
 - medical writing,
 - proposal/grant writing, and
 - instructional design
- Analyzed each posting's job description, skills requirement, and candidate's qualifications
- Compared/contrasted items in related and non-related fields
- Correlated postings to curricula in undergraduate tech. comm. programs



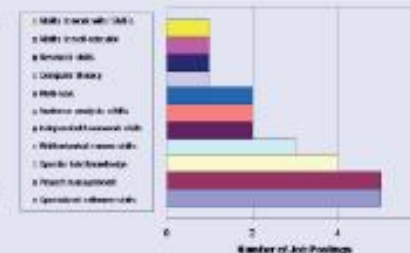
Department of English
<http://www.uhd.edu/academic/colleges/humanities/english>

Results

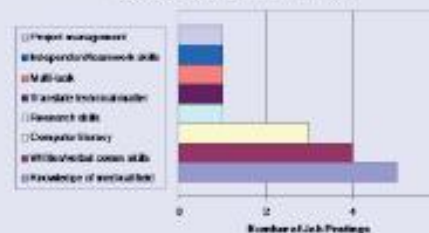
Common Technical Communication Courses



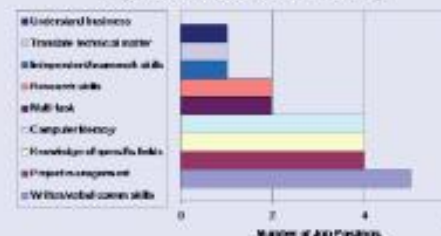
Required Skills for Software Documentation



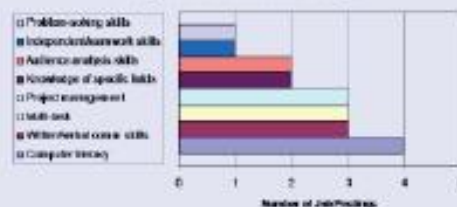
Required Skills for Medical Writing



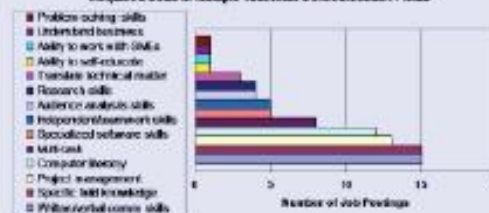
Required Skills for Proposal/Grant Writing



Required Skills for Instructional Design



Required Skills in Multiple Technical Communication Fields

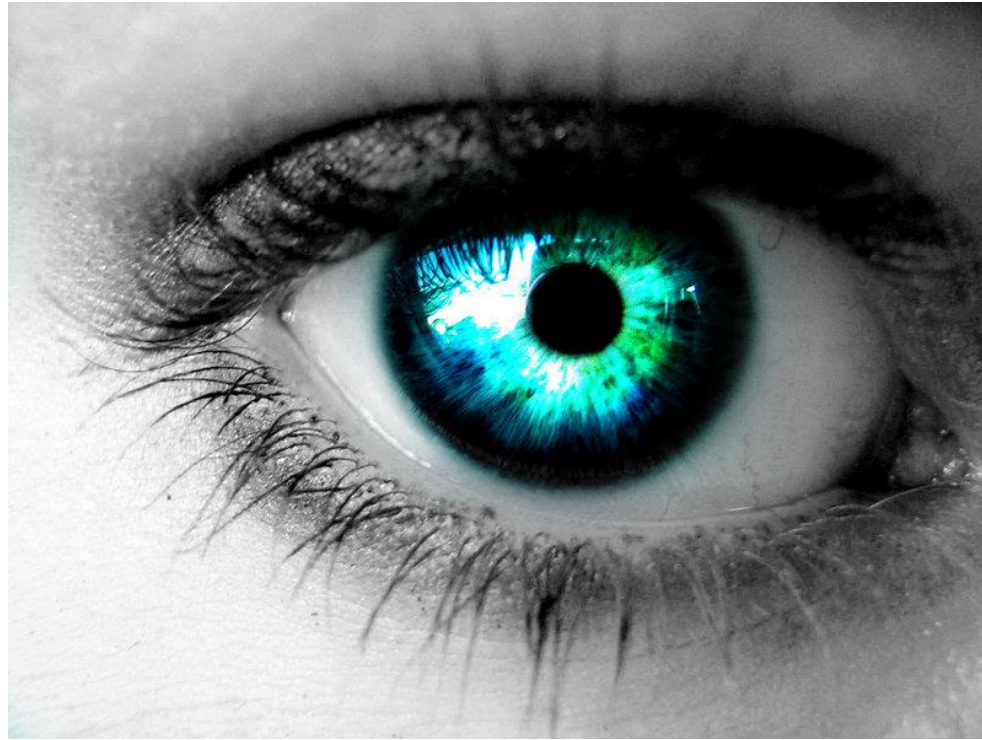


Conclusion

- No uniformity in curricula found among sample of undergraduate tech. comm. programs
- Most job postings required field-specific knowledge; not explicitly addressed in curricula
- Communication skills most important in workplace but also not addressed in curricula
- Employers uncertain about graduates' amount of knowledge in specific fields of tech. comm.
- Specialized courses prepare graduates for specific fields but limits versatility
- Workplace communication remains a continual issue unless uniformity is set for all tech. comm. programs

Faculty research sponsors:
Dr. Stephanie Turner and Dr. Aimee Roundtree

Preparing Your Performance



Undergraduate Poster Competition

- Prizes!
- Judging

<http://sites.jcu.edu/celebration/pages/poster-competition/>



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Questions?

Slides from this presentation are available on the web at:

<http://sites.jcu.edu/celebration/>

Acknowledgements:

- Dueck, Rachel. “Presenting research visually: a poster design overview.” Northern Arizona University.
- “Poster Presentations.” Undergraduate Research. University of Connecticut