Digital Scholar Training Series
Spring 2015 Report
Helping Researchers Better Utilize the Web
# Data Literacy

Social Media Data and Infographics

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Overview

In Spring 2015, we continued the Digital Scholar Training Initiative. The series “Using Social Media Data to Gain Community Insights and Inform Organizational Strategy” was supported by a Data-Driven Assignment Grant from the USC Center for Scholarly Technology in support of the Office of the Provost’s strategic focus on data literacy, and our partners at the popular healthcare social media analytics company Symplur.

The Spring 2015 series was tailored to the needs of students at all levels and consistent of two workshops:

- **Workshop 1**: Using Social Media Data to Gain Insights into Community Trends
- **Workshop 2**: Creating Compelling Infographics

The series was designed to help students develop marketable skills to analyze social media data, translate the data into compelling visuals (infographics) that clearly communicate the key messages, and develop actionable insights that inform organizational and research strategy.

The Digital Scholar page is publically available and provides easy access to workshop-related resources (http://sc-ctsi.org/digital-scholar/#spring-2015).
Peer Evaluation

To evaluate the final infographics, we leveraged a student peer evaluation process. All students who participated in the work groups and submitted an infographic based on their social media data reports got a chance to anonymously evaluate each other’s infographics to determine the three winners.

While evaluating the work of their peers, students had the opportunity to be exposed to the work of others, explore new ways of thinking about the topics and both refine and reflect on their own understanding.

Digital Tools Used

- Peer evaluation
  - Formstack form builder tool: [https://www.formstack.com/](https://www.formstack.com/)
- Communication
  - Email marketing platform MailChimp: [http://mailchimp.com/](http://mailchimp.com/)
  - Twitter: [https://twitter.com/hashtag/DigiScholar15](https://twitter.com/hashtag/DigiScholar15)
Perspectives from Digital Scholar Trainees

“I think it’s often difficult to tell a compelling story just by using numbers. The challenge is learning how to tell that story in a way that people will engage with you. The workshop has helped me learn how to use infographics to simplify a data-dense message.”

– Alison Trinidad, Senior PR and Social Media Specialist, Keck School of Medicine of USC, and a student at the Annenberg School of Communications and Journalism

https://www.youtube.com/watch?v=NaRRKm2YUtK

“The most exciting thing about the workshop was the peer evaluation review. It’s much more interactive than a homework project that you just get a score on.”

– Ning Huang, PhD Candidate, Department of Biochemistry and Molecular Biology, Keck School of Medicine of USC

https://www.youtube.com/watch?v=Tj7fHVq5da0
Key Data

Attendance

127 signups were received for the Digital Scholar Spring 2015 series from faculty, SC CTSI KL2 scholars and TL1 trainees, postdoctoral scholars, and PhD students across 9 USC schools, 20 USC departments, CHLA, and UCLA. The workshops were limited to 40 attendees.

- Workshop 1: 38 attendees
- 21 students joined work groups
- Workshop 2: 11 attendees
- Infographic submissions: 11 students

Satisfaction

77% of post-workshop respondents (10 out of 13) indicated they were very satisfied or satisfied with the workshop.

85% of post-workshop respondents (11 out of 13) said that they would recommend continued Digital Scholar training opportunities.
Detailed Workshop Analysis

Instructors
Katja Reuter, PhD, Director, Digital Innovation and Communication, Southern California Clinical and Translational Science Institute (SC CTSI)
Audun Utengen, MBA, Co-founder of Symplur, a healthcare social media analytics company, LLC and “The Healthcare Hashtag Project
Thomas Lee, BS, NHA, Co-founder of Symplur

Figure 1: Qualitative feedback from workshop participants
21 Attendees | 13 Responses | 62% Survey Response Rate
(Survey was sent to attendees who joined a work group, 21 total.)

Figure: Evaluation of Data Literacy Skills and Assignment

- Comfort with Data
- Importance of Data to Career
- Repeatability of Data-Driven Assignment
- More Data Knowledge than Before
- More Likely to Use Data

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree
**Table 1: Further qualitative feedback provided by participants**

**Strengths**
- “Great class, I was waitlisted and glad to be able to attend.”

**Areas for Improvement**
- Concern about cost of using Symplur Signals database and therefore limited access
- Would like to be able to access the program/database longer
- Difficult to collaborate with other students after workshops, design student project with more in-class time
- Fewer assignments such as out-of-session training videos or reports

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**Outlook**

We will expand the workshop series and develop a more standardized curriculum, involving other USC schools, centers, groups, CHLA, and strategic industry partners. Among new suggested topics are in-depth workshops on recruiting study participants online, digital approaches for residents, and data sharing on digital platforms.

**Voices from our Trainees:**

Voices from our Trainees: http://sc-ctsi.org/digital-scholar/trainee-voices.html
Workshop-Related News Story

SC CTSI’s latest Digital Scholar workshops provide hands-on experience with social media data analysis and infographics.

PUBLISHED 11 MAY 2015
WRITTEN BY PAUL KARON

In collaboration with the innovative healthcare social media analytics company Symplur, the Southern California Clinical and Translational Science Institute (SC CTSI) has launched a new workshop series to help students and scholars at USC develop marketable skills to analyze health-related social media data, develop actionable insights to inform organizational and research strategies, and communicate these messages through compelling infographics.

The most recent workshops, "Using Social Media Data to Gain Community Insights and Inform Organizational Strategy," showed students how to tap into the immense quantity of data generated by the popular social media platform Twitter.

The broad introduction of digital and mobile technologies into nearly every aspect of society has presented health professionals and scientists with valuable opportunities. But a high degree of data literacy is required to extract useful insights from the billions of bytes of information generated every day, as well as to communicate those insights effectively.

Symplur provided the workshop students with access to Symplur Signals, a growing database of more than 850 million disease- and healthcare-related Twitter user messages (tweets). Updated daily, the database includes more than 320 million user profiles, 6,000 Twitter hashtags, and 14,000 unique healthcare topics.

"The collaboration with SC CTSI has been inspiring for all of us at Symplur working to advance research in this area. The data generated by social media activity has tremendous potential for researchers wanting to uncover insights on human behavior relating to health. Katja Reuter and her team is paving the way for academia to take advantage of and further this new research field." said Symplur co-founder Audun Utengen.

Course attendees, who came from departments throughout USC, worked in groups of four to complete proposed analysis projects and develop reports.

"Although the workshop was extracurricular, we were delighted to work with a group of highly engaged students who impressed us with their thoughtful data reports and creative infographics," said Katja Reuter, PhD, Director of Digital Innovation and Communications at SC CTSI. "There is a clear need to train teams in academia, research, and health care to tap into this type of data and gain insights to inform their work in new ways, from science communication to patient engagement, study participant recruitment, and research projects in general."

Students' Perspectives

"I know there’s a lot of data out there on social media and especially on Twitter, and after going to the workshop I learned that you could actually quantify a lot of the conversations. It’s interesting being able to gather insight from many conversations and infer areas where you can make a difference," said Alison, Trinidad, Senior PR and Social Media Specialist, Keck School of Medicine of USC, and a student at the Annenberg School of Communications and Journalism whose infographic project placed first.

"I think it’s often difficult to tell a compelling story just by using numbers," she added. "The challenge is learning how to tell that story in a way that people will engage with you. The workshop has helped me learn how to use infographics to simplify a data-dense message."

Watch the video interview with Alison Trinidad

Ning Huang, a PhD candidate in the Department of Biochemistry and Molecular Biology, whose infographic project placed second in the group evaluation, said that the workshop exposed her for the first time to the extent and value of social media data. She previously had no access to this data, nor did she know what type of questions it could help her ask and analyze. "The workshop taught me what we can learn from social media conversations for a preliminary analysis in support of a potential research project. This is novel and many research mentors don’t necessarily know how to do this," she said.

Students and scholars can now further develop their data analysis and infographic skills at upcoming workshops:

- "Understanding Social Media Analytics: From Data to Insights" (25 May 2015)
- "Advanced Social Media Analytics: From Insights to Actions" (22 June 2015)
- "Beyond the Tweet: Analyzing Longitudinal Disease- and Health-Related Social Media Data" (20 July 2015)
- "Infographics: From Perception to Persuasion" (27 July 2015)
Promoting Data Literacy Skills Among Students and Scholars in the Health Sciences

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"I took this course because it focused on social media and data literacy," added Benjamin Brekke, USC graduate student in Biostatistics and Epidemiology, and Health IT professional. "One of my focuses is public health policy, I really want these skills to improve my ability to communicate with the public."

**Peer Evaluation Boosts Workshop Impact**

Students were asked to evaluate each other’s projects to determine the three best infographics. This process exposed them to the different ways their peers approached topics and solved problems. View the peer evaluation page

“The peer evaluation was one of the most exciting things about the workshop,” said Huang. "It’s much more interactive than a homework project that you just get a score on.”

The workshop was part of the SC CTSI’s ongoing Digital Scholar Training Series, designed to help researchers better use social media and other digital technologies to advance their research and career goals.

The workshop was supported by a Data-Driven Assignment Grant from the USC Center for Scholarly Technology in support of the Office of the Provost’s strategic focus on data literacy and by SC CTSI.

All workshop materials are available on the Digital Scholar page.
Acknowledgement

Founder and lead instructor of the Digital Scholar Training Series: Katja Reuter, PhD, Director of Digital Innovation and Communication at SC CTSI.

The Digital Scholar Spring 2015 series was supported by a Data-Driven Assignment Grant from the USC Center for Scholarly Technology in support of the Office of the Provost’s strategic focus on data literacy; the healthcare social media analytics company Symplur; and SC CTSI’s Workforce Development and Digital Innovation and Communication core groups.

The following groups and people helped to make this series a success. Thank you!

**SC CTSI**
- Francis Ukpolo, MBA
- Praveen Angyan, MS
- Julian (Yoon Ju) Lee
- Jonathan M. Samet, MD, MS
- Cecilia Patino-Sutton, MD, PhD
- Jeanne Dzekov
- Annie Hong
- Aileen Dinkjian, MPH
- Allison Orechwa, PhD
- Daniella Garofalo

**Symplur**
- Audun Utengen, MBA
- Thomas Lee, NHA

**USC Center for Scholarly Technology**
- Robert Sweeney
- Katherine Cherie Guevara
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The Southern California Clinical and Translational Science Institute (SC CTSI) is part of the Clinical and Translational Science Awards (CTSA) network funded through the National Center for Advancing Translational Sciences (NCATS) at the NIH (Grant Number UL1TR000130).