Case Study:
Arizona State University
Team Building Using SciVal Topics of Prominence

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Executive summary

Arizona State University, rated as the most innovative university in the US for the 5th year in a row, is continuously exploring new methods to build teams of interdisciplinary researchers to address societal challenges.

Using SciVal's Topic Prominence in Science, researchers were gathered for a 2.5-day workshop to brainstorm how together, we can move the needle on the addiction crisis facing our nation today.
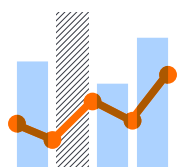
Background

"SciVal is the first "online pivot table" of bibliometric data that can be quickly and efficiently organized for each of my university's many academic departments and research centers."

ASU has increased its research expenditures over five-fold since 2002 (National Science Foundation Higher Education Research and Development survey). This has largely occurred due to the university's investment in state-of-the-art research facilities, ability to attract excellent faculty and students, and growth of community partnerships to ensure that the scholarly work conducted is embedded in our society and local culture.

However, as the university grows, it faces a challenge that many other large universities have also faced, which is expertise profiling and facilitating how researchers find each other across campus. This is an important issue for a large research institution because an expertise directory allows students to find mentors, researchers to find collaborators, and administrators to promote research and gauge campus strengths.

Many university departments, including some at ASU, have manually created such databases where self-identified keywords are searchable and associated with experts. However, this is painstakingly manual to create and keep current. They are also often available for only one department or research center, defeating the purpose of utilizing such tools to find collaborators not within your own discipline.

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Using SciVal for Scholarly Work Analyses

SciVal is a commercially available solution that aims to address this issue. There are other solutions, but SciVal has proven itself to be useful here in Knowledge Enterprise (KE), home of all research, strategic partnerships, and entrepreneurship activities. KE Analytics manages the university's subscription to SciVal and provides quantitative strategic decision support to university leadership.

As a proof of concept and to respond to the nationwide crisis on substance abuse and addiction, KE leadership was keen to put together a task force to address this issue that is of the utmost importance to Arizona. As a public university, it is ASU's responsibility and desire to perform impactful work on issues close to home.
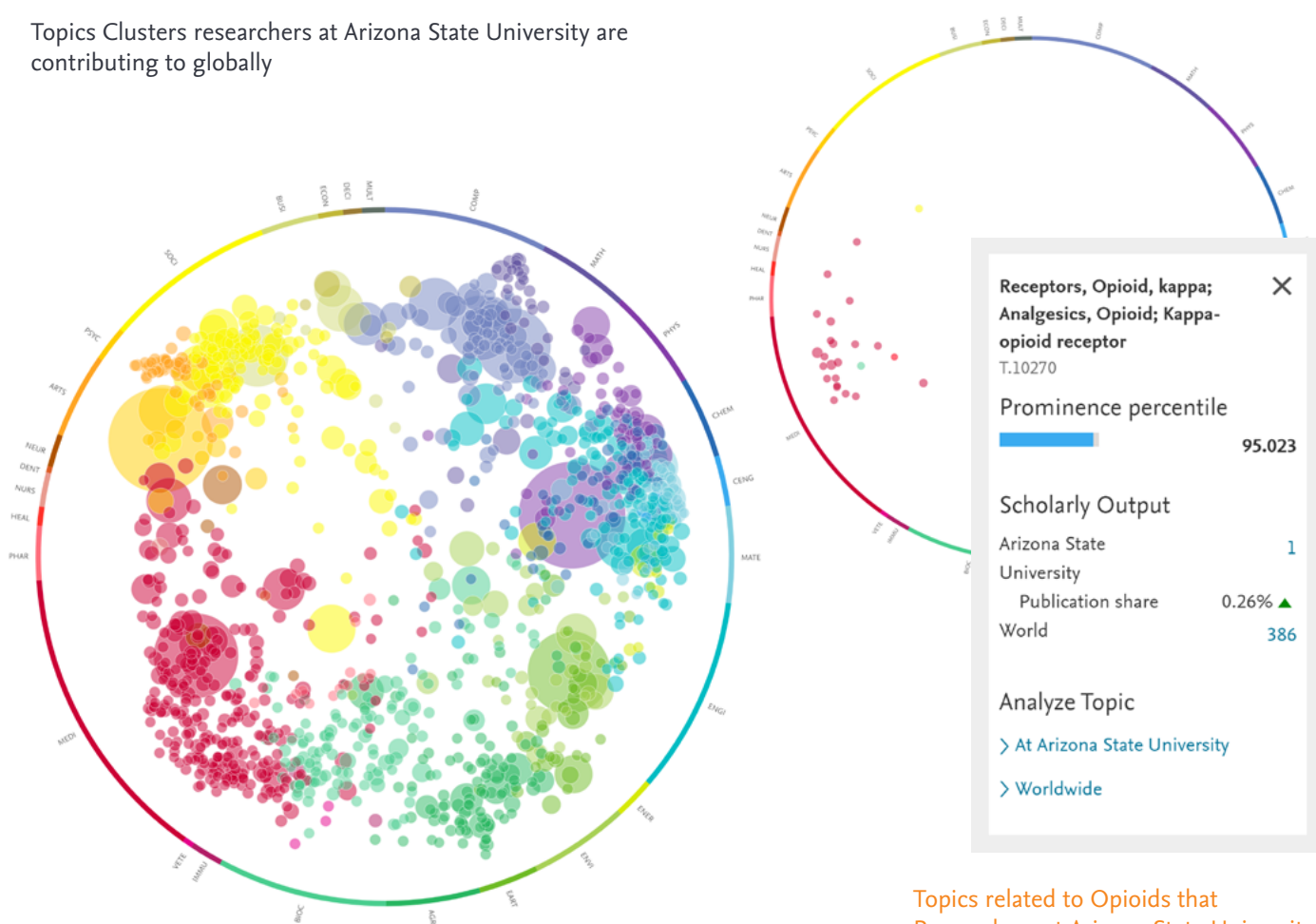
Through news stories and general awareness, a few names of key researchers came to mind immediately.

However, ASU wanted to expand the team to more than just a handful of researchers, and with a campus of over 3,400 faculty, there needed to be a way to systematically find other relevant researchers. SciVal became the obvious starting place where scholarly works could be mined for authors. Upon analysis, several opioid related terms were part of Topics that had a high Prominence percentile* at ASU. From here, as people say, the rest is history.

*Prominence combines 3 metrics (Citation Count, Views Count and Average CiteScore) to indicate the momentum of a Topic

Topics of Prominence - Arizona State University

Topics Clusters researchers at Arizona State University are contributing to globally

Receptors, Opioid, kappa; Analgesics, Opioid; Kappa-opioid receptor
T.10270

Prominence percentile
95.023

Scholarly Output

Arizona State University
1

Publication share
0.26% ▲

World
386

Analyze Topic

> At Arizona State University

> Worldwide

Topics related to Opioids that Researchers at Arizona State University are contributing to globally

Building a Team

SciVal was the initial tool used to identify possible team members. It is important to note that other tools were also used as reliance on one tool will not offer enough data and can lead to a biased result. Much can be done in a systematic, database-driven way, but with team building, other aspects must also be accounted for. Perhaps researchers do not have bandwidth to work on a new project. Perhaps other faculty are growing interest in this topic but have not published any papers on it yet (SciVal is based solely on publications). These and other details were gathered manually and a program was put together by KE for the researchers that were selected (and had volunteered) to participate. This two-day workshop, set in the fall of 2019, brought together 35 ASU researchers from over 11 departments and centers. KE partnered

with Knowinnovation, an external consulting team with extensive expertise in facilitating scientific team building and interdisciplinary innovation.

The event was held in-person as well as virtually, with non-ASU partners also participating. The issue of substance abuse is a community issue, so state and federal partners were also invited. Attendees included participants from 3 ASU campuses, 4 different states and 7 other institutions & organizations. In total, 56 people participated and generated 8 ideas to move forward with. The outcomes of this exercise will not be known for several more months as funding opportunities and preliminary work are carried out, but the process has been widely accepted as a success and we will continue to use this model for team building in the future.

"The data from SciVal was a very important factor in helping us to identify our strengths.   We used the information to identify a focus area for our design workshop as well as faculty to include."

Conclusion

Feedback from the researchers has been very positive and there has been momentum gained on the potential projects that may result from the experience. KE is working with faculty to facilitate the research administration of their great ideas. Our partner organizations, both at the state and federal level, are eager to work together to address Arizona's substance abuse issue. Broader impacts will be more fruitful and measurable as time continues. KE plans on continuing to incorporate SciVal into team building exercises on other community topics.

Acknowledgements go out to Dr. Sarah Jones and Dr. Cynthia Sagers, both of ASU Knowledge Enterprise, for their substantial roles in leading the Know innovation workshop and assistance in preparing this case study.

Stacy Esposito
Executive Director, International Projects
Knowledge Enterprise
Arizona State University

Stacy Esposito joined ASU Knowledge Enterprise in 2019 as Executive Director and reports to KE's Chief Operating Officer. Stacy's current efforts are focused on managing and advancing KE's international portfolio. Prior to joining KE, Stacy served as Senior Director of Research Advancement (RA) for Fulton Schools of Engineering (FSE). In this capacity, she led 35 RA staff managing the FSE research enterprise at the proposal administrative, proposal development, and post-award levels. Stacy also supported special projects for the Dean of FSE.

At FSE, Stacy led her team to submit approximately 1,300 proposals annually totaling over $1B. Research expenditures exceeded $120M annually and included a diverse portfolio of government agencies, charitable donors, and corporate partners. Research development efforts included designing and executing faculty and staff workshops, managing proposal reviews, and strategizing teaming agreements. Stacy's expertise focuses on individual and team development, management and leadership development, as well as process improvement and project execution.

Research advancement has been central to Stacy's career for the past 24 years; 13 at ASU and 11 years at the University of Southern California. She earned a MPA from USC and a BA from the University of Minnesota. Before her work in research advancement, Stacy served the Minneapolis community as a licensed social worker.

Hansa Magee
Associate Director, Analytics
Knowledge Enterprise
Arizona State University

Dr. Hansa Magee is the Associate Director of analytics at Arizona State University's Knowledge Enterprise. She completed her Ph.D. at Arizona State University from the Fulton Schools of Engineering and was a National Science Foundation Graduate Research Fellowship Program recipient as well as a Fulbright recipient. Her role in ASU's Knowledge Enterprise is to provide analytical strategic decision support and sustainable reporting for all university leadership and research support staff. She works with university research deans, Knowledge Enterprise leadership, and strategic initiative directors to identify and analyze metrics such as sponsored project growth, bibliometric indicators, and returns on university investments. She also responds on behalf of the university to the National Science Foundation Higher Education Research and Development (HERD) survey and other research surveys. Analytics manages commercial research analysis subscriptions such as SciVal and provides training and maintenance for the university.

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