

CASE STUDY

Knovel[®]

Oklahoma State University

Making web-savvy students research-savvy



SUMMARY

Knovel helps Oklahoma State University instill practical research skills to engineering students.



ELSEVIER

“Knovel is the type of tool [students] will be well served by in both academic and industry settings.”

— Kevin P. Drees at Oklahoma State University, Stillwater



KEVIN P. DREES is the Engineering Librarian at Oklahoma State University – Stillwater where he has been employed since 2002. He received his B.S. in Mechanical Engineering from the University of Kansas and an M.L.S. from Emporia State University. He serves on the Publications and Mentoring Committees in the Engineering Libraries Division of the American Society for Engineering Education (ASEE).

Profiling Kevin Drees, Engineering Librarian at Oklahoma State University, Stillwater.

For nearly 10 years, Kevin Drees has taught freshman engineering students the essentials of academic research. Initially, the emphasis had been on print resources—both where to find them and how to use them effectively. As the bulk of science and engineering data moved online, however, the Oklahoma State University Engineering librarian decided his approach to teaching had to shift as well. “I was looking for a means of shifting more of the instruction from print to online, to reflect the availability of online materials, and I found I could do that for ebooks with the Knovel database.” The current generation of students has always embraced the Internet as an information resource, but they haven’t fully grasped how to ensure the credibility of their results.

That’s where the Knovel Academic Challenge (KAC) came in.

KAC allows students to confidently utilize Knovel’s sound, peer-reviewed content in a fun, competitive way. This annual competition pits college-level science and engineering students against one other as they try to answer a series of technical research questions using Knovel’s online resources. As incentive, students who successfully complete the Challenge are eligible to win prizes ranging from cash to cool technology such as tablets or mp3 players. To further motivate his students, the OSU-Stillwater librarian made the Academic Challenge a part of their grade.

A knowledge tool for both academia and industry

Drees incorporated the KAC into his curriculum because Knovel’s online resources include science and engineering texts and handbooks, professional society and government documents, manuals and technical reports. This breadth and depth of materials make Knovel “the type of tool [students] will be well served by in both academic and industry settings.”

Knovel offers access to its resources from any screen with an Internet connection. The content is completely searchable. And the online database also comes with useful engineering tools like interactive tables, graphs, unit converters, etc. “You can’t do that with standalone ebooks,” says the librarian.

Credible data is critical for success

Drees considers Knovel valuable for his students because its information is readily accessible and, more importantly, because it is thoroughly reliable. The validity of data is something students have to understand if they are to succeed in their professions.

“Engineering information is prolific, ubiquitous and without cost on the web. Unfortunately this same free information is incomplete, often lacks credibility, and does not necessarily reflect the complexity of the engineering disciplines it represents. Subscription paid databases [like Knovel] are credible, complete and reflect the complexity of engineering.”



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OKLAHOMA STATE UNIVERSITY,
STILLWATER

“I have worked in industry, having earned a degree in mechanical engineering, and I know firsthand how frustrating it is to scramble for reliable information when it’s not readily available. And, I tell you from my own experience as a librarian, that students and faculty deserve to learn about and use the credible sources that libraries provide; rather than discover the sources after their senior capstone design project in their undergraduate program or the equivalent in graduate and post-doc positions.”

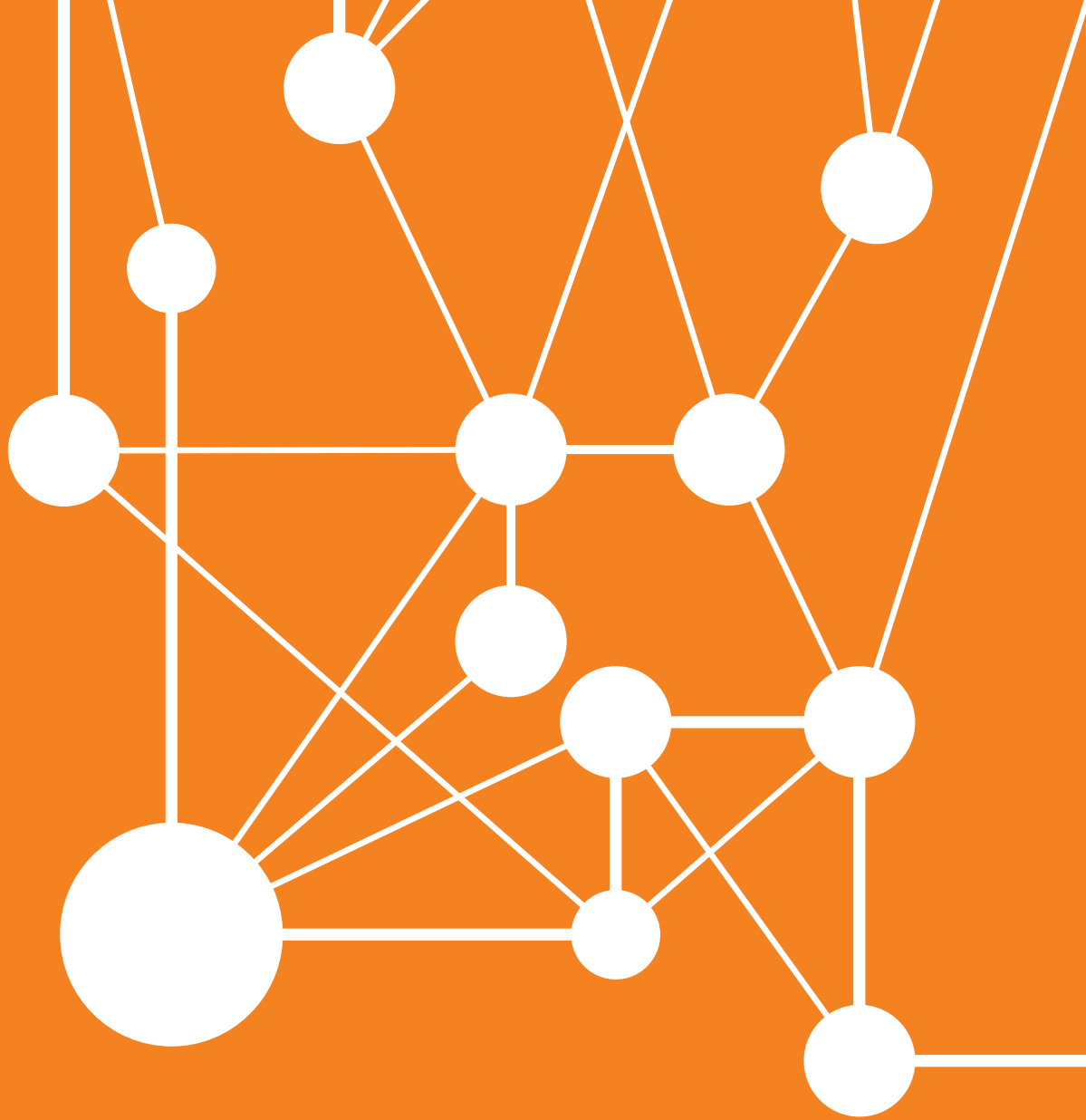
Learning to do professional work with Knovel

Like their counterparts in industry, the students must learn to consume information and make decisions about sources they encounter. Drees introduces them to Knovel so they can learn how to do their work properly. “I incorporated the Knovel Academic Challenge in a graded homework assignment that I provided to the

600+ students in the freshman engineering orientation session. In the lecture that I provide to students prior to the assignment, I included Knovel because the research shows that hands-on searching with a database in an instruction session followed by an assignment completed afterwards increases the likelihood that students anchor the memory of the respective database and its usefulness.” The librarian also wants the students to be able to extend the benefits of their education well beyond their college years.

Drees describes himself “as a connector, essentially linking people to ideas, connecting people one to another, so they’re making as much use of the literature as they can to supplement what they learn in the classroom. I’m trying to scaffold behaviors for lifelong learning.” With degrees in mechanical engineering and library science, and a thirst for knowledge from numerous sources, the OSU librarian is certainly a lifetime learner himself. Like any good librarian, though, he is most adept at helping his students open doors to develop their understanding. What he shows them not only informs their performance at school, it helps them map the course of their future careers as well.

And when Drees’ students ultimately choose a profession, their experience with Knovel can help open those doors as well.



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