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Integrating External Resources into Informatics and Computing Instruction: Emerging Roles for Librarians and Information Professionals

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Purpose: The objective of the course was to promote critical thinking about various algorithmic approaches to working with bioscience data. The instructors from the library created an iteratively updated online subject guide containing summary-level information and online resources on the programming language R, data mining, and identification of bioscience datasets.

Setting/Participants: A librarian (D.B.) and a digital curation fellow (M.B.) taught a graduate level course on computational methods in health informatics. Students were from basic science and informatics programs and had varying levels of computational experience.

Conclusion: Information professionals are uniquely suited to curating supplemental online resources in educational settings. Providing resources tailored to students' diverse needs throughout semester long computational methods instruction is an emerging opportunity for information professionals who wish to take an active role in fostering literacy in computational environments.

Next Steps: In order to optimize the usefulness of the guide for future course sessions, the instructors will conduct a formal assessment of how students interact with and value the materials. The organic nature of the initial development did not cater to assessment.

Role: Central Educator
Inform Curriculum Design
Advise on Textbook Selection

Role: Curator of Online Resources
Accommodate differing learning styles
Iteratively update content to suite student needs

Role: Promote Information and Data Literacy
Help students assess resources and ask questions
Integrate basic data management instruction

Support from the Library

Barriers impacting student success with computational tools

Different backgrounds/learning styles
Lack of familiarity with programming concepts
Unfamiliar jargon
Difficult articulating questions

Role: Inform Curricular Design
Advise on Textbook Selection

Background: In informatics courses, instructors often present materials in a didactic, module-by-module fashion and may not readily integrate outside materials to facilitate learning. This may be due to a lack of time or expertise in identifying appropriate external resources. Librarians are uniquely suited to address this gap.

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