

For the people, by the people - An Open Access eTextbook powered by faculty, students and librarians

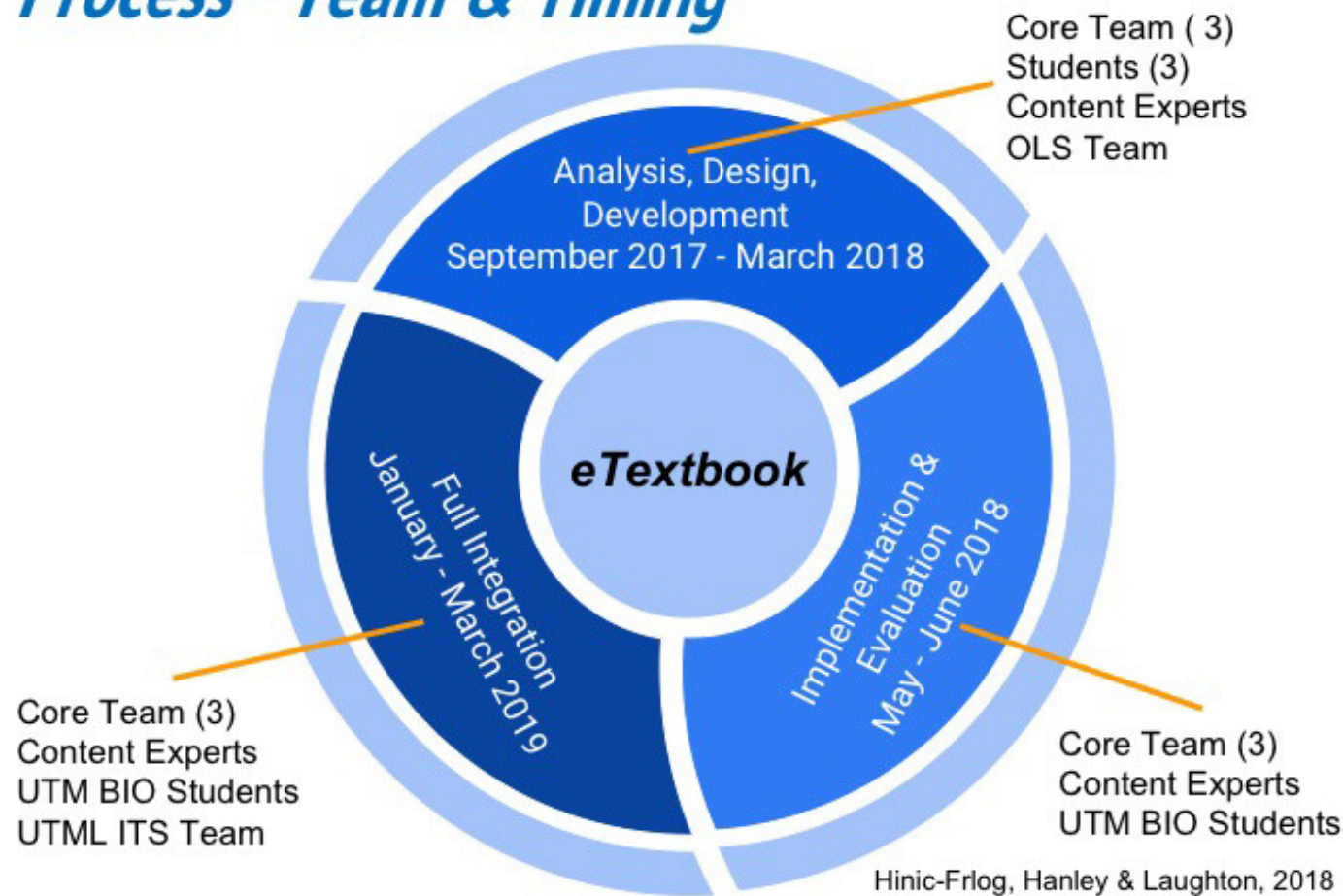


Sanja Hinic-Frlog, PhD, Jessica Hanley, MLIS, Simone Laughton, MSt, MA
University of Toronto Mississauga

Abstract

We have created an open eTextbook to meet the specific learning requirements of Biology students taking an Animal Physiology course. Key aspects of this project are the involvement of students at every stage in the process and clear linkages made with course learning outcomes to support student learning.

Process - Team & Timing



Improvements needed:

- Develop opportunities for student self-check to support metacognition.
- Add more peer activities and collaborative exercises.
- Include more practice activities and challenges.
- Provide more activities focused on reflection.
- Assess / check student understanding.

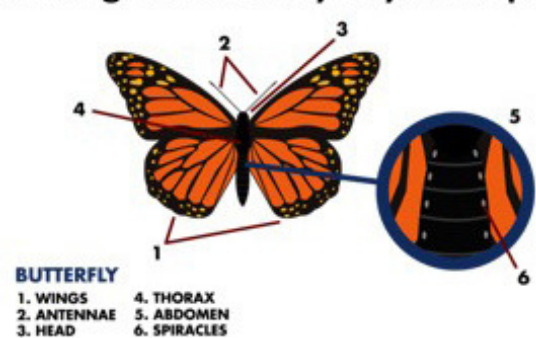
Student Participation throughout the Project

As part of the design and development project team, 3 undergraduate students

- **Assisted with building** the eTextbook (Pressbooks).
- **Participated in team meetings** (O365, Slack, Skype).
- **Designed icons** (using image creation and editing software, web accessible colour testing and the institutional Visual Identity Style Guide).

Icon Title	Image	Icon Title	Image
Learning Outcome		Listen to Podcast	
Challenge / Task		Peer Collaboration	
Discussion		Quiz	

- **Developed original images to convey key concepts**



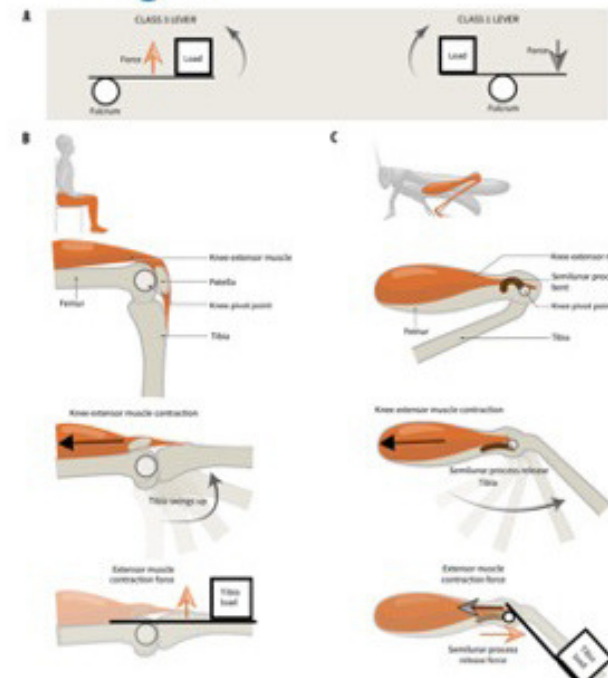
Undergraduate students from the UTM ICCIT and graduate students from the UTM Biomedical Communications program created, in consultation with the instructor, detailed original images and video to convey key concepts.

- **Student provided input and feedback**

UTM Biology student input and feedback will be gathered during the Winter 2019 iteration of the course to identify improvements that can be made to the eTextbook.

New Student – Instructor Generated Content Joints and Skeletal Movement

Image:



This figure was developed and illustrated by Deniz Kaya and Evelyn Lockhart, MSc Graduate students in UTM Biomedical Communications, Project for MSC2001Y Visual Representation of Medical Knowledge (Professor Michael Corrin), 2018.

Video:



This video was created by Chi-Chun Liu, MSc Graduate student in UTM Biomedical Communications, Masters Research Project, Reanimating the Hesperornithiformes (Supervisor: Dave Mazierski), 2015.

Integration of Learning Outcomes, Activities, Feedback and Assessment

Learning Outcome:



6.3. Explain different types of locomotion with reference to environmental limitations and/or hard structure support for muscle function.

Specific video example related to text – Joints and Skeletal Movement:



Watch the [video](#) about swimming locomotion in extinct Hesperornithiformes to help you understand how skeleton and muscles coordinate to generate locomotion and why some animals may be more limited in locomotion in one type of environment.

Activity (Challenge): Animal Locomotion



Question 6.5
Which mode of locomotion do you think is least efficient in terms of total energy expenditure if you are considering animals of different size?



\$90.00 per textbook

+



480 students enrolled

=



\$43,200.00 in savings

Financial Benefit to Students

Ideas for Future Development

- Incorporate instructor-vetted content from students (e.g., augmented and virtual reality, videos and images).
- Non-traditional course reserves (e.g., iPads for student use).
- Additional instructor resources – supplementary tutorial information, quizzes, activities, etc.).
- Further exploration of eTextbook integration with Quercus (Canvas), the institutional learning management engine.
- Allow for content submission from 3rd party conservation and research groups.
- Versioning of the eTextbook as changes are made.

Thank you to:



Centre for Teaching Support & Innovation