SABBATICAL REPORT FOR SABBATICAL LEAVE, FALL 2013

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Objectives:
1. To learn how to develop Online Open Lab for Biology courses on human anatomy and physiology (ZOOL 240, ZOOL 241, BIOL 130, BIOL 130L, and BIOL 100).
2. Create collection of digital materials for Online Open Lab.
3. Organize collection.
4. Put materials online and make it available for Leeward Community College students and faculty.

Objectives relationship
1. **College strategic plan goal, mission statement**: “Access | To broaden access to postsecondary education in Hawai‘i, regionally, and internationally by providing open-door opportunities for students to enter quality educational programs within their own communities.” Online Lab is accessible from anywhere where Internet is available. Online Lab will serve students from any place, including Waianae campus, where Leeward CC does have the highest percent of Native Hawaiian students in the system.

2. **College strategic plan, mission statement**: “Learning and Teaching To specialize in the effective teaching of remedial/developmental education, general education, and other introductory liberal arts, pre-professional, and selected baccalaureate courses and programs, with the goal of seamless system articulation and transfer, where appropriate. To structure our programs in such a way that they reflect not only academic rigor but also student development, learning outcomes and student goals. The College is committed to the achievement of student learning.” Online Lab will allow students to reach learning materials anytime, from anywhere, and free of charge. Currently Online labs are provided by publisher and cost about $50 per student at Leeward Community College. At Kapiolani Community College Online lab is developed and supported by college, and free to any Kapiolani CC student. By developing and offering Online Lab at Leeward CC, college will meet modern standards for teaching/learning effectiveness to all our students. It is also possible to extend our service in the future to all colleges in the system. To insure quality of Online Lab, and its compliance with Students Learning Outcomes for human anatomy and physiology courses, all learning and teaching materials will be done on college and
national standards’ level according to Leeward CC and Human Anatomy and Physiology Society SLOs.

3. **College strategic plan, mission statement:** “*Work Force Development* | To provide the trained workforce needed in the State, the Asia-Pacific region, and internationally by offering occupational, technical, and professional courses and programs which prepare students for immediate and future employment and career advancement.*”

There are two benefits for work force development: one is connected to a nature of human anatomy courses, and another one is connected to online location of materials.

Firstly, by their nature, Human Anatomy and Physiology courses are taken as prerequisite for Nursing, EMT, Rad Tech, and other allied health related programs which do have a high demand in the state and across the nation. Providing learning opportunity 24/7 to all students free of charge will benefit all students aiming for allied health career.

Secondly, BIOL 100 Human Biology course is part of new Leeward CC Associate degree in Science. Each semester five sections of BIOL 100 (total enrollment 175 students) and three sections of online BIOL100 course (total enrollment 115 students). BIOL 100 course does have 100% of enrollment, and demand is growing. Making materials available at Online Lab will help student to earn AS degree, and will benefit students who take these high enrollment courses face-to-face and especially online.

**Sabbatical Activities Planned to Accomplish**

**Preparation to Sabbatical Activities:**

**Learn from the best sources about Online Labs:**

1. Attend **International Conference on Education**, Honolulu, HI, January 5 – January 9, 2013 and learn new modern ways of online materials delivery currently existing across the country and world. My conference participation is supported by Division Travel Grant Committee and fully funded by Division Travel Grant.

2. Attend **Annual Conference of Human Anatomy and Physiology Society (HAPS)**, Las Vegas, NV, May 25 – June 1, 2013, and explore possible ways to deliver human anatomy materials online according to the Society standards (applicable to all North America). My participation in conference is supported 50% by college travel grant, and 50% by my WO Learning Champions Professional Development grant.
3. Working in collaboration with Kapiolani CC faculty, evaluate their resources at KCC Online Anatomy Lab.

4. Using college grant provided to me for this project development, hire student assistant for Spring 2013 on grant money to help with collection of digital materials for anatomy part of the lab.

5. Using college grant for this project, buy necessary hard drives, jump drives, 3D camera, and other equipment for this project.

**SABBATICAL ACTIVITIES REPORT**

1. **Conferences/workshops:**
   A. Attended two conferences listed above as planned. Made a professional contact with Mark Nielsen, professor of University of Utah, and obtained his permission to use his Human Cadaver materials for my Virtual I-Human Lab. Presented my work at my workshop at HAPS International Conference at Las Vegas.
   B. Also attended WILD Professional Development Day held by WO at Windward CC and presented Virtual Lab at my own workshop. Made two professional contacts with Kapiolani CC faculty about collaboration on this project to make it system wide project in the future.

2. **Materials created for the Virtual Lab during sabbatical leave:**
   A. Made pictures of anatomical models and animal specimens, all together 365 pictures. Example of the pictures is shown in Attachment 1.
   B. Photoshopped all pictures by higliting all organs/structures included into Anatomy Lab Examinations. All together 700 pictures with different structures. Example of this is in Attachment 2.
   C. Labeled all highlighted organs/structures as a study guide and learning material as shown in Attachment 3.
   D. Sorted, cataloged, and created Power Points for all structures/organs as six PPT files (one for each laboratory examination, by human systems, i.e. “Skeletal System”, “Muscles”, “Nervous System”, “Endocrine, Lymphatic, and Circulatory”, “Digestive and Respiratory”, “Reproductive Systems (male and female)”
E. Using microphotocamera, took pictures of human tissues slides using microscope and photocamera. Sorted by type of tissues studied during the course (i.e. “Epithelial Tissue”, “muscle Tissue” and others). Cataloged Histology Online lab materials for uploading to make materials available to students for learning and available to instructors for teaching.

F. Working with Kapiolani CC Leading Anatomy Instructor Ron Don, obtained a permission to use his video on animal dissection for my I-Human Lab.

G. Working with Multimedia Department, obtained permits for all materials, including resolving possible copyright issues.

H. Working with Therese Nakadomari, Leeward Community College IT Server & Network Infrastructure Manager, obtained approval from college for website link name.

I. Arranged the space on college server for all materials, and started uploading them.

J. The website for I-Human Lab from students’ access and Instructor access points is http://emedia.leeward.hawaii.edu/i-humanlab/

K. In progress: making I-Human Lab accessible online to Leeward CC students by using UH student ID and password.

**Work in Progress and Future Plan Based on Sabbatical Outcomes**

Online I-Human Lab project is ongoing project, which will need constant upgrades and maintenance.

1. In collaboration with Kapiolani CC and Leeward CC faculty, PPT files will be converted using Kamtasia Studio software to accompany slides with audio (pronunciation of organs/structures labeled as a teaching online tool for pronunciation to the students in Human Anatomy (ZOOL 240, ZOOL 241, BIOL 130, BIOL 130L, BIOL 100 courses with total enrollment about 1,000 students per academic year) of as well as Intro To Health Profession, Survey of Medical Terminology and Medical Terminology courses (HLTH 110, HLTH 120, and HLTH 125, total enrollment of 500 students per academic year)

2. Based on this project, I will rewrite my Lab Manual published by Pearsons in 2007: Custom Edition for Leeward Community College
and incorporate I-Human Lab as a part of Lab Manual for both, ZOOL 240 and ZOOL 241, courses.

3. I will also involve newly hired faculty, I-Chia Shin, into this project, and encourage her to rewrite Lab Manual for BIOL 130 L course (which is currently published by Pearson's as a second edition by authors Rhea Hautea and myself) and incorporate I-Human Lab materials into BIOL 130 lab course as well.

4. I will present I-Human Lab at International HAPS conference in 2015 in San Antonio, TX, and make it available to the faculty across the country with copyrights belonging to Leeward CC as a part of UH system.

**A Summary to Sabbatical Contributions**

1. Students access to Human Anatomy and Physiology Lab from anywhere. This access will benefit more than 1,500 students each year.

2. Full-time faculty as well as lecturers will have an access to teaching materials which are peer-reviewed, and in compliance with the college, system, and national standards materials. Currently three full-time faculties and seven lecturers teach human anatomy-related courses.

3. Leeward CC will become second in UH system college (after Kapiolani CC) which offers such open Online learning anatomy lab to its students, and only college which offers teaching anatomy materials to faculty.

4. Online Lab can be essential part of the first online biology lab. BIOL100 L course does not exist in Leeward CC catalog, but does exist across the system. BIOL100L course proposal, development, and online delivery were base for a grant submitted in Summer 2012. Once grant is approved, course will be proposed, diversified, and eventually will become the only science lab course which students can take online. This course will become part of AS degree, and will allow students to earn AS degree completely online. Currently science course is a bottleneck for online earned AS degree.

5. In the future this materials can be made available to students from all UH colleges as well as to faculty to benefit not only Leeward Community College, but all UH system.
ATTACHMENT 1
Example of anatomical model picture:

ATTACHMENT 2
Example of the same picture with organ highlighted:
ATTACHMENT 3

Example of the same picture with organ highlighted and labeled: