



TLEF Project – Final Report

Report Completion Date: (2022/06/30)

1. PROJECT OVERVIEW

1.1. General Information

Project Title:	“Redesigning Wine Science 1 & 2 to integrate diverse topics and experiential learning by students”		
Principal Investigator:	David McArthur		
Report Submitted By:	David McArthur		
Project Initiation Date:	May 2019	Project Completion Date:	June 2022
Project Type:	<input type="checkbox"/> Large Transformation <input checked="" type="checkbox"/> Small Innovation <input type="checkbox"/> Flexible Learning <input type="checkbox"/> Other: [please specify]		

1.2. Project Focus Areas – Please select all the areas that describe your project.

- Resource development (e.g. learning materials, media)
- Infrastructure development (e.g. management tools, repositories, learning spaces)
- Pedagogies for student learning and/or engagement (e.g. active learning)
- Innovative assessments (e.g. two-stage exams, student peer-assessment)
- Teaching roles and training (e.g. teaching practice development, TA roles)
- Curriculum (e.g. program development/implementation, learning communities)
- Student experience outside the classroom (e.g. wellbeing, social inclusion)
- Experiential and work-integrated learning (e.g. co-op, community service learning)
- Indigenous-focused curricula and ways of knowing
- Diversity and inclusion in teaching and learning contexts
- Open educational resources
- Other: [please specify]



1.3. Final Project Summary FNH 330/335 (lectures/labs) were both updated and re-structured into more distinct modules as proposed - with more flexible online assignments that provide options for those with different learning styles. FNH 330/335 exams were adapted to the Canvas Quizzes format & these exams and new mini-quizzes linked Instructor-authored videos (22 for FNH 330 and 10 for FNH 335), lectures & reading resources. Teaching Assistants were trained for the online lab-instruction/exam-marking. Due to the Covid-19 pandemic issues, wine sensory & tasting labs were significantly modified to an online format starting May 2020 (to April 2022) ... Videos were VERY helpful for sensory training, wine tasting and for background content. While a demo-wine-making project was a component of FNH 335 still, each student in FNH 335 Winter term 2020 and Winter term 2021 had a newly-derived & facilitated take-home winemaking assignment with support videos and online supervision to ensure this was a beneficial & positive experience. Note that students in FNH 335 Winter 2021 came in for the lectures & some labs – winemaking-demos were used when in person; videos & take-home wine samples (for sensory review) were assigned homework (facilitated by the Instructor on Zoom). With the reduced risk level of Covid-19 in 2022, FNH 330 951 2022 returned to a modified in-person lab format; however, with the exception that labs were no longer online - the changes that were allowed via this TLEF grant remained in use and useful. It had been intended that the FNH 330 booklet resource files would be updated and edited to move more of the lecture content into the files to facilitate a less rushed lecture period. However, while most files were updated, the intended transfer of some lecture material/pictures/maps etc into booklets was not realized... This was in part due to time-constraints for the Instructor, but also as many students were off campus/out-of-town (Covid precautions) and it was difficult to identify graduates of FNH 330/FNH 335 (wine knowledge plus English editorial skills were needed) who were available and willing to meet in person (with Covid-safe conditions in place) to review the project and work closely with the Instructor. With a new Instructor in place July 1, 2022 (McArthur has retired), it is hoped that this work will still get done sometime soon – possibly by the new Instructor (time permitting).

1.4. Team Members – Please fill in the following table and include students, undergraduate and/or graduate, who participated in your project.

Name	Title/Affiliation	Responsibilities/Roles
David McArthur Ph.D.	Fulltime Lecturer:continuing status	Principle Applicant
Leighland Joyce	Undergrad Academic Asst	Technical assist for viticulture-videos FNH 330
Riley Bertoncini	Undergrad Academic Asst	Consult-discussions for FNH 330/335 resource materials
Tony Zeng	Undergrad Academic Asst	Technical Editing/consulting on viticulture & winemaking videos FNH 330/335



1.5. Courses Reached – Please fill in the following table with **past, current, and future** courses and sections (e.g. HIST 101, 002, 2017/2018, Sep) that have been/will be reached by your project, including courses not included in your original proposal (you may adapt this section to the context of your project as necessary).

Course	Section	Academic Year	Term (Summer/Fall/Winter)
FNH 330	001 (& labs)	2019	Fall
FNH 330	002 (& labs)	2019	Winter
FNH 330	951 (& labs)	2020	Summer Term 1
FNH 330	001 (& labs)	2020	Fall
FNH 330	002 (& labs)	2020	Winter
FNH 335	001 (& labs)	2020	Winter
FNH 330	951 (& labs)	2021	Summer Term 1
FNH 330	001 (& labs)	2021	Fall
FNH 330	002 (& labs)	2021	Winter
FNH 335	001 (& labs)	2021	Winter
FNH 330	951 (& labs)	2022	Summer Term 1
FNH 330	001 (& labs)	2022	Fall
FNH 330	002 (& labs)	2022	Winter
FNH 335	001 (& labs)	2022	Winter
McArthur retires 07_2022 & Jay Martiniuk hired 07_2022	Assumes use of resources in FNH 330/335		
	Limited use in FNH 405	Fermentation videos	

2. OUTPUTS AND/OR PRODUCTS

2.1. Please **list** project outputs and/or products (e.g. resources, infrastructure, new courses/programs). Indicate the current location of such products and provide a URL if applicable.

Product(s)/Achievement(s):	Location:
FNH 330/335 (lectures/labs) were both updated and re-structured into more distinct modules with more flexible online tools that provide options for those with different learning styles.	UBC Canvas: McArthur 2020 to 2022 now Martiniuk Fall 2022
As above, FNH 330/335 Exams adapted to Canvas Quizzes format & new mini-	UBC Canvas: McArthur 2020 to 2022 now Martiniuk Fall 2022



quizzes linked to videos & lecture & reading resources	
22 new videos for FNH 330 – see Playlist FNH 330 Youtube	https://www.youtube.com/playlist?list=PLa0Gpcf5WSNSXyagwJpKmdruLMUoOc146 now Martiniuk Fall 2022
10 new videos for FNH 335 – see Playlist FNH 335 Youtube	https://www.youtube.com/playlist?list=PLa0Gpcf5WSNRa9_xQG8KVuilD0pUx1LrB now Martiniuk Fall 2022
FNH 330/335 Labs Wine sensory & tasting labs were significantly modified to an online format starting May 2020 (to April 2022) due to the Covid-19 pandemic issues... FNH 330 951 2022 returned to a modified in-person lab format – but the online approach will no doubt still be a future tool. A new approach: facilitated take-home wine-making assignment, and take-home wine-tasting-review assigned with online supervision.	UBC Canvas: McArthur 2020 to 2022 now Martiniuk Fall 2022
FNH 330 and FNH 335 Teaching Assistants were trained for online labs and marking online exams.	UBC Canvas: McArthur 2020 to 2022 now Martiniuk Fall 2022

2.2. Item(s) Not Met – Please list intended project outputs and/or products that were not attained and the reason(s) for this.

Item(s) Not Met:	Reason:
FNH 330 resource files were updated and improved, but the intended transfer of some lecture material/pictures/maps etc into booklets was not realized.	This was a result of a combination of unavailable qualified students (not on campus/moved away) + course format changes with resulting time constraints required due to covid.

3. PROJECT IMPACT

3.1. Project Impact Areas – Please select all the areas where your project made an impact.

- Student learning and knowledge
- Student engagement and attitudes (**with a Covid caveat**)



- Instructional team-teaching practice and satisfaction (**with a Covid caveat**)
- Student wellbeing, social inclusion (**with a Covid caveat... online was more difficult than in person**)
- Awareness and capacity around strategic areas (indigenous, equity and diversity)
- Unit operations and processes
- Other: [please specify]

3.2. What were you hoping to change or where were you hoping to see an impact with this project? – Please describe the intended benefits of the project for students, TAs, instructors and/or community members.

Hoped for: *Restructuring of Wine Science courses addresses pre-existing learning gaps of students of diverse academic, geographic and cultural backgrounds. Course material is re-organized with each module utilizing 60% lecture, 30% hands-on lab and 10% background video-clips (sub-titled) & self-testing quizzes on Canvas. Online materials re-enforce presentations - defining key principles and content.*

The development of diverse FNH 330/335 videos with use of “local” wine-growing sites and wine-making techniques did/does facilitate learning by students of diverse background... But while the tools were/are now in place... during the pandemic shutdown... many students missed out on taking this information/learning out of the class/lab and applying it as self-study in the field/wineries/vineyards/educational wine festivals... and this may change with the current relaxation of restrictions related to Covid. Some students appeared interested in joining the wine-growing industry and finding a career pathway.

As proposed FNH 330–modules now include: i. videos on methodologies for scientific sensory evaluation of wine ii. wine-growing/enology; FNH 335 modules include: advanced winemaking defining main processing steps and problems. Video-clips illustrate fermentation steps and development of microbes. Lecture & reviewable materials are in parallel with wine-making projects (FNH 335 class) [although it was not possible to arrange visits with the BC-VQA wineries (Covid pandemic)].

The approach used did jump-start understanding of concepts, principles and winemaking steps, plus promoted integration of wine theory and empirical components of wine-growing. Changes do provide enhanced scientific preparation for higher courses in LFS (e.g. FNH 430 (wine), PLNT 442/542). As proposed, partners did include the Learning Centre, students and wine-industry professionals.

3.3. Were these changes/impacts achieved? How do you know they occurred? – How did you measure changes/impacts? (e.g. collected survey data, conducted focus groups/interviews, learning analytics, etc.) Describe what was learned from this process. You are encouraged to include copies of data collection tools (e.g. surveys and interview protocols) as well as graphical representations of data and/or scenarios or quotes to represent and illustrate key themes.

It was noted that the general average-mark each term was 5-7% higher with the FNH 330/335 courses taught 2020-2022. While some feedback surveys and focus group work were initially conducted... with the pandemic restrictions there was a drop in further follow-up... partly this was due to the rather intense



ramping up of online teaching away from the in-person teaching style (Instructors and TAs... had much to learn!). Also, many students did not return to Vancouver during the past several academic terms... time zones were in some cases difficult to work around.

3.4. Dissemination – Please provide a list of **past** and **upcoming** scholarly activities (e.g. publications, presentations, invited talks, etc.) in which you or anyone from your team have shared information regarding this project. Be sure to include author names, presentation title, date, and presentation forum (e.g., journal, conference name, event).

Not applicable here.

4.

TEACHING PRACTICES – Please indicate if **your** teaching practices or those of **others** have changed as a result of your project. If so, in what ways. Do you see these changes as sustainable over time? Why or why not?

The TLEF project resulted in the production of some significant resource materials – mainly videos and take-home lab projects... Again in reference to the pandemic, the funding was timely – and most certainly allowed for a richer experience for students during the pandemic than would have been otherwise... and the Instructor, TAs and UAAs learned much about alternate forms of instruction and learning.

I as the TLEF lead and retiring Instructor for FNH 30/335 am grateful to be able to pass these new resources and learning/teaching experiences on to the new Instructor and I do believe that they will continue to be useful in the future.

5. PROJECT SUSTAINMENT – Please describe the sustainment strategy for the project components. How will this be sustained and potentially expanded (e.g. over the next five years). What challenges do you foresee for achieving the expected long-term impacts listed above?

There is a new Instructor for Wine Science in LFS at UBC. Jay Martiniuk was a former student & TA of McArthur's and also taught FNH 330 as a sessional in the fall of 2019; also he has a wine industry background. Jay is in place as of July 1, 2022 – for both FNH 330 and FNH 335. These courses will continue to evolve with his input. McArthur has retired, but is facilitating the transfer of information -content & resources. It is hoped that this course resources will continue to improve and the editing of the supplemental resource booklets will still get done sometime soon – possibly by the new Instructor (time permitting). Challenges? If Covid-19 re-appears as a threat to in-person teaching again, the Instructor has options that will allow for on-line teaching and that includes for the lab work. However, it was apparent that some of the student excitement & interest in these wine science courses was diminished with the limitations placed by Covid-19... Hopefully, these courses will rebound and student enrollment and satisfaction will max-out out as in the past; however, if the Covid restrictions are put back in place... some further experimentation with course format and teaching style may be necessary.