TEACHING MATTERS – Winter 2023

Grading and Assessment

In this edition of *Teaching Matters* we have gathered and shared a variety of insights and practices related to grading and assessments. Marking is not often considered to be the best part of a teacher's life, but sometimes an assessment works really well, or a grading practice proves to be particularly fair (or efficient). As instructors, we are also interested in assessing engagement of students. The following articles give a sample of practices of instructors at UNB.

For those who are interested, information about how to register for upcoming Centre for Enhancement of Teaching and Learning (CETL) sessions this winter are given at the end.

Thank you to those who kindly contributed materials for this edition. What about you? What assignment or assessment worked for you? Is there anything you tried that you want to avoid? If you are interested in contributing to or have a theme idea for a future edition of *Teaching Matters*, be sure to contact the Editors.

Sincerely,

David Creelman (creelman@unb.ca) and Rebecca McKay (rebecca.mckay@unb.ca)

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Co-Chairs of the Teaching and Learning Committee,
UNB Saint John campus

Dr. Strangeteach or: How We Learned to Stop Worrying and Love Non-Traditional Teaching

David Speed and Jonathan Wilbiks, Psychology

*Drs. Speed and Wilbiks contributed equally to this project. But because Dr. Speed is writing this division of labour statement, he will take an additional 0.001% of the credit for the project.

Student engagement is the proverbial Holy Grail of pedagogy. Having students motivated to come to class for the sake of learning is something that all instructors strive for. There is endless discussion, debate, and dispute over 'the best way' in which to teach, the best way to motivate students, and the best way to capture students' interest. In a sense, all post-secondary instructors are naïve scientists, there will be an attunement to which teaching strategies seem to work, and which teaching strategies seem to flounder.

In 2018, my colleague and I were both teaching the same introductory psychology classes and would often have conversations about how each other's classes were progressing. There are some materials that we had to cover that we did not particularly enjoy teaching and there were other materials that we had to cover that we did particularly enjoy teaching. Interestingly, we had little overlap in what we enjoyed teaching, which was likely due to being from very different areas of psychology. Through these conversations we realized that we would be able to do so something novel in the context of our lecturing: we would use a 'Team Teach' approach for our lecturing. We would pick our 'best' lectures from the introductory class and then be responsible for teaching each of our sections on those materials. For half of the term one of us would be very busy, while the other would focus on other duties. Being vaguely clever we called our approach **In**tradisciplinary-**T**opic **Ro**tation (INTRO) and began to envision what this would look like.

Our motivation was initially to be more efficient in what we were spending time in class doing. But, as we researched the implementation of our idea, we realized there was scant evidence that our idea would work. To be clear, Team Teach was not a 'new idea', but experimental evidence for the effectiveness of Team Teach was lacking. We decided to fold our teaching idea into an ambitious research project at very little time investment to us: we would actually test whether Team Teach promoted better learning outcomes for students. After further discussion we hit on the idea of examining student engagement specifically. By the end of our planning phase we realized we had hit the academic trifecta: 1). We reduced our effective teaching workload, 2). We would enjoy teaching more, and 3). We got a built-in research output. This is the equivalent of finding $20 and eternal joy in a random pair of pants from the thrift store (the third benefit in this example is the pants themselves).

Adopting a 'Go Big or Go Home' mentality, we decided to delay the implementation of Team Teach for a year in order to produce a better research project. We would maintain a traditional lecturing style in Fall of 2019 and Winter of 2020, while tracking student engagement at five points over each semester (First Day, Midterm #1, Midterm #2, Midterm #3, Last Day). We would then use these data to produce a baseline measurement of student engagement that would be the basis of comparison. In the following years we would switch to a pure Team Teach approach and compare the differences in student engagement from one year to the next. This research design could not demonstrate causality, but it could provide decent circumstantial evidence that one pedagogic approach was different from another. The only issue with our research design was that it was particularly vulnerable to something called 'cohort effects'. These occur when there is a systematic difference across conditions that cannot be parsed or separated from the actual effect of a manipulation. In other words, there may be a built-in engagement difference across students in the 2019, 2020, and 2021 years, for which we could not adjust. But we consoled ourselves that this was unlikely as cohort effects are generally produced by major events that are widespread. In our case specifically, the event would have to affect who went to university, how classes were taught, and how students would be able to participate within a classroom. Nothing short of a global pandemic would cause problematic cohort effects.

As COVID-19 swept across Canada in early 2020, we realized that our careful planning was, perhaps, irrelevant. As we were debating of what to do with the one term of baseline data we had collected, we had a realization. We could pivot our research question in a meaningful and substantial way: we had a once-in-a-lifetime opportunity to compare how pandemic-related changes in teaching delivery affected student engagement. Our baseline data were not only useable, but they were also the last 'pre-COVID' data that could have been collected. It was a snapshot into a pedagogical 'before time'. In Fall 2020—following our university's operational plan—we changed the delivery of our INTRO classes. We pre-recorded lectures before the beginning of the term and organized a variety of in-class activities in which students could participate. Our midterm structure was altered and moved online, but all other mark-based activities were retained. Our in-class activities were varied but consisted of jointly playing video games, determining collective guilt, distributing candy for a research methodology exercise, as well as electrocuting each other. For science. This approach resembled a 'Flipped Classroom' albeit with seminar-like features. Throughout this period (Fall 2020) we continued collecting engagement data. In Fall 2021, we finally implemented our Team Teach approach with students back in the classroom. We rotated lecturing responsibilities all the while following our data collection schedule that we had started in 2019. Unfortunately, our experiment into effective pedagogy came to a halt in 2022 due to conflicting teaching schedules, but we still managed to collect three years of data.

Our results were a good mixture of obvious, surprising, and disconcerting, although our data can be interpreted in various ways. When comparing the first data points for student engagement in 2019, 2020, and 2021, we found that students in 2019 had much higher levels of initial engagement than the comparator years. Students in 2019 were more engaged initially with Intro Psychology that were students in the 2020 and 2021

school years. What is also evident from our results is that there was a steady and pronounced decline in student engagement throughout the Fall 2019 school year. This negative trend remained consistent across each of our dependent measures (enjoying intellectual challenges, satisfaction from studying, finding lectures stimulating, finding the class to be intellectually stimulating, being motivated to study). In contrast, both the Flipped Classroom and Team Teach approaches started out comparatively lower than the Traditional lecturing model; students in 2020 and 2021 were not initially as engaged with the class as from previous years. However, the engagement for a Flipped Classroom increased as time went on and the engagement for Team Teach remained stable throughout the semester. By the last data collection point in 2020 and 2021, it was not uncommon to see a novel classroom approach to 'out-perform' the Traditional model from 2019.

First, the obvious. From the get-go it seemed likely that students attending university during a pandemic would be less likely to experience engagement in the classroom. There were necessary procedures and restrictions in place to help limit the spread of COVID-19, but these limited the opportunities for students to interact with others and to experience university in a normative sense. Additionally, the global atmosphere in Fall 2020 may have affected outlook and optimism students would experience.

Second, it was surprising to us that the Flipped Class approach in Fall 2020 showed gains in student engagement, given that health-related restrictions put into place by our institution. Students had limited opportunities to interact with each other and with us as instructors, but several of the outcome measures showed growth regardless. It was a little disappointing, albeit mildly amusing, that Team Teach (in 2021) did not appreciably improve student engagement. In these models, student engagement remained relatively fixed over the semester, which was surprising given that the scant existing literature on the topic speaks positively of this approach. It was somewhat disconcerting to see a relatively static experience for students with little change over the semester.

Third, the disconcerting. Our approach compared the experiences of students in a 'normal' school setting and contrasted them with the experiences of students in two types of 'pandemic' classrooms. While traditional lecturing started out the most positively, by the end of the school term there was either parity in student engagement across Traditional, Flipped, and Team classrooms, or Flipped outperformed the Traditional mode of instruction. The implication of this finding is stark, novel teaching methods under pandemic restrictions engaged students more than did typical teaching methods before the pandemic. Notably, the majority of student experiences is with a Traditional teaching method.

Our study was not without limitations and readers should be skeptical of any broad conclusions from it. Students who attended university in 2020 and 2021 may be meaningfully different from students who attended university in 2019. Similarly, students who were willing to participate in INTRO data collection may have been different in 2019, 2020, and 2021. Given the change in our method and analysis strategy, it is possible that a different approach to the data analysis may have yielded dissimilar results. Finally, our target audience and others' target audiences may be non-

comparable, maybe our experiences are only applicable to our campus's introductory psychology students. With these acknowledgements aside though, we believe that it is incumbent on researchers to not only pilot new pedagogic approaches, but also test their effectiveness as rigorously as can be managed. While the results may be less than motivating, the pursuit of knowledge for its own sake is a worthy endeavour.

Student to Student Peer Responses: Keeping Students Engaged During Presentations

David Creelman and Rachel Bryant, Department of Humanities and Languages

Courses frequently include moments when students are responsible for presenting course material. Case-studies, seminar presentations, reports, debates, and project presentations all involve students taking over the class. For a brief time, the students become the teachers, and usually these moments are very engaging (and sometimes frightening) for the presenters. However, keeping the other students in the class alert and involved can be tricky. After all, the students watching the presentations are thinking about their own future (or past) performance, and since they have less at stake, they may not be fully connected to the work their peers are presenting. Having students prepare "Peer-responses" is one way of making sure they remain engaged during class, and might even encourage them to do some preparation ahead of time.

In 2021, while working as the Educational Developer at UNB Saint John, Dr Rachel Bryant developed a "Teaching Assessment Form" to help professors assess each other's classroom teaching. With a little modification and some specific instructions geared toward students, this form can be used to help "students respond to students" in a classroom setting. The specific instructions added to the top of the form, emphasize that students need to remain collegial, and they need to know the material being discussed well enough to identify what might be missing. Requiring students to complete peer-assessments several times during a term, helps them develop assessment skills that they will need in their future professions. And of course, completing peer-assessments helps them refine their own sense of clarity and tact.

Feel free to adopt and adapt this form as suits your purposes. David has used this process with several classes, and while students will tend to leave the completion of their responses until late in the term, the peer-to-peer assessments do help them engage more deeply with the course material their colleagues are presenting.

Peer Response Form for Presentation:

Name of the Reviewer: _____

Name of the Presenter: _____

Subject of the Presentation: _____

Date of Presentation/Assessment: _____

Instructions:
- Five times this term you will need to complete this form and provide a thoughtful response to a presentation. Each is worth 2 marks. The Peer Response work in this course is worth 10% of your total grade.
- Your response to a presentation will be given, unedited, to the presenter; therefore, please be honest, helpful, and considerate. If your response is un-collegial it will not be passed along, and will not count toward your Peer-Review Mark. All responses must be typed.
- The Assessment must be submitted within 24 hours of the presentation. Late responses will be passed along, but it will not be counted as part of your Peer-Review Mark.
- One of the purposes of these peer-responses is to demonstrate that you have read and considered the material discussed during the presentation. Please be detailed and clear especially when answering the final two questions, to demonstrate that you were fully prepared to complete this task.
- Your response will provide helpful information to the presenter, and I will assess your response based on the clarity, content, and thoughtfulness of your reflections. Your response will not shape the grade I give the presenter.
- Please note the minimum characters required in each section. You can write more than this by using a smaller font.
- You should try to submit one response every two weeks. You must submit a minimum of 5 responses. You can, if you like, submit more than 5 and I'll count the best of the lot. Avoid leaving all your responses to the later part of the term. If presentations are cancelled due to illness or storm, your chance to earn those marks will be compromised.

The best idea in this presentation was:	(200 char min)
One suggestion about the content of this presentation is:	(200 char min)

The best aspect of this presenter's style was:	(200 char min)
To assist this presenter to enhance her/his speaking style I suggest:	(200 char min)
My understanding of the text being considered was enhanced by this part of the presentation:	(450 char. min)
This part of the text being considered was not addressed:	(450 char. min)

(The template for this form, is based on "Teaching Assessment Form," developed by Dr. Rachel Bryant in 2021)

Letters Are Better Than Numbers

Aaron Granger, Department of Biological Sciences

The problem

Students are incentivized to prioritize high grades over learning. The requirements for competitive scholarships and entry into graduate and professional schools are generally based on grades. Anecdotally, I have had many students tell me that they view university as a means to an end and that they would gladly take a deal where they obtain good grades but do not learn anything. This focus on final grades often leads to students exhibiting grade challenging or grade grubbing behaviour – reaching out after assessments to complain about a one-point deduction here or half-a-point deduction there without focusing on what those deductions are indicating about their understanding of the material. This kind of behaviour is clearly bad for the students, but it is also bad for the educator – with a class of several hundred students there is simply not enough time to handle that many interactions.

As educators, we naturally want our students to reach their goals *and* we also want them to focus on understanding the material. When we mark numerically, we can certainly justify all of those small point differences according to the marking scheme or rubric, but students are often upset when a single point can be the difference between a B and an A. And put that way, I understand their frustration – the numerically tiny difference between a 79% and an 81% on a test can seem a bit arbitrary.

The (possible) solution

One fairly easy way to change to focus away from nitpicking grades and onto understanding is to stop marking numerically and start marking categorically with letters. At UNB, we have definitions for letter grades; the following is taken from the academic calendar:

| Definition	Letter Grade	GPA Equivalent
	A+	4.3
Excellent performance	A	4
	A−	3.7
	B+	3.3
Good performance	B	3

	B–	2.7
	C+	2.3
Satisfactory performance	C	2
Less than satisfactory performance	D	1
Failure	F	0

When marking with letter grades you can mark holistically, determining whether an answer is Satisfactory, Good, or Excellent. This changes the conversation away from a specific numerical grade and towards an assessment of categorical quality of the work. By marking holistically, you can place the focus on the student's overall understanding of the material rather than breaking a mark down into many pieces (content/conceptual, typographical, mathematical, etc.) and having deductions for each error. When using this method of grading, I use 5 grades (A, B, C, D, F) with no +/– modifiers. I only add the modifiers at the end of term, when the final grade is calculated by a weighted average of all the individual assessment GPAs.

Certainly, when marking something it is both easier and faster for an educator to decide whether an answer is Good (B) or Excellent (A) than it is to see the difference between a 79% and an 81%. If you provide students with a clear rubric, it is also easier for the students to see the difference between a Good answer and an Excellent one. When a student does not like their grade they are forced to assess how their answer is categorically better than the mark that they were awarded rather than focus on small individual errors with individual point values.

How did it turn out?

One benefit of moving to a letter grading system, completely outside of its effectiveness, was that it forced me to be explicit about what criteria I need to determine whether an answer deserves an F, D, C, B, or A. Initially, I worried that I would set the standard too high and end up giving a D or F grade to a huge percentage of my students. However, I have used this method of grading since 2019 and the results have been encouraging. In general, I have fewer students failing, fewer students getting A+ grades, and a majority of students spread across the C – A range in a tighter distribution. See the figure below for grade distributions in an introductory chemistry class (CHEM 1041, approximate class size = 160 students) I have taught yearly since 2014.

Grade Distribution for CHEM 1041
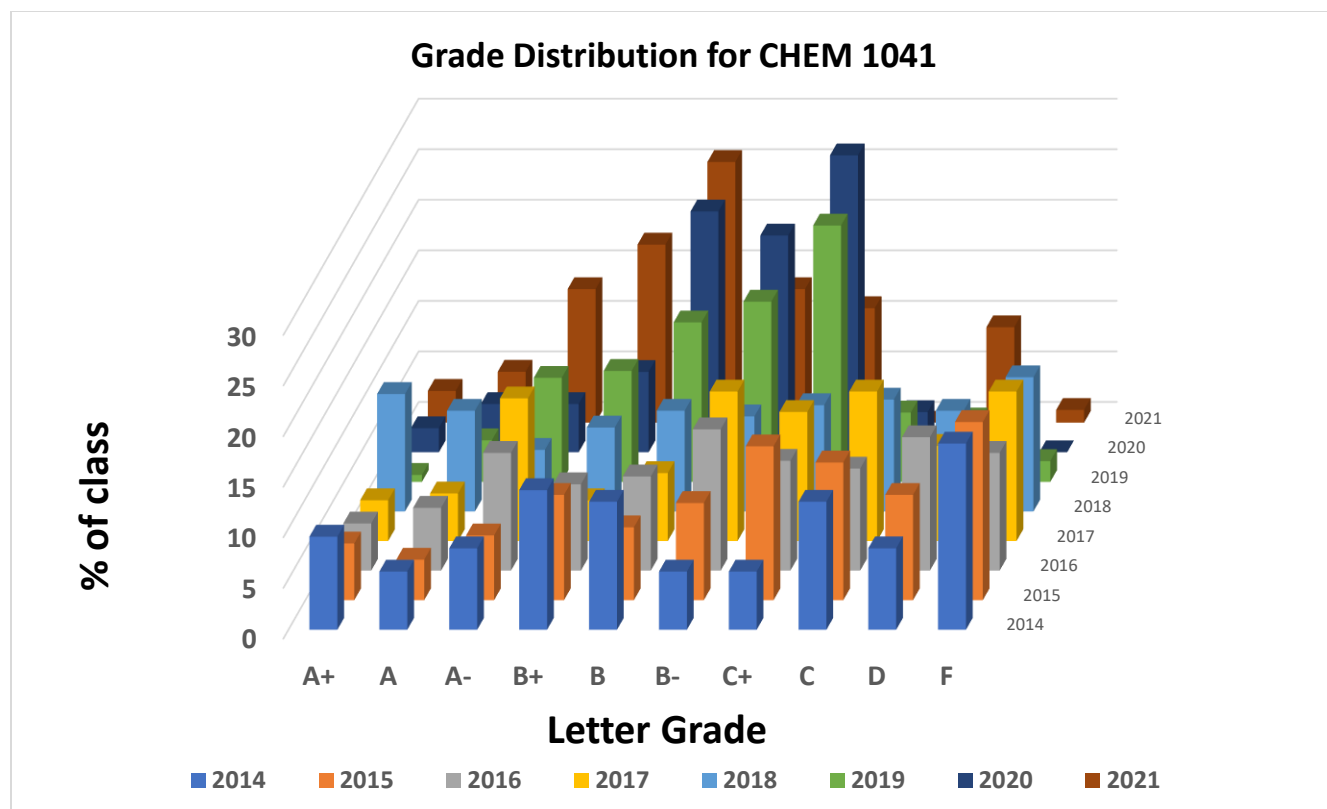
The distributions from 2019 – 2021 that are the product of the letter grading system are in line with both my expectations of a reasonable grade distribution and with my 'gut feeling' assessment of how the students have performed. Looking back on a student-by-student basis, I do not feel like anyone received a final grade that was dramatically different than what it should have been if using numerical grading.

Caveats

There are a few practical issues that need to be overcome for letter-based grading to work, two of which are A+ grades and rubrics. It is impossible for a student to obtain an A+ using this method without any modifications. You can get around this in a few ways: making each letter grade correspond to a higher GPA than listed in the UNB calendar, awarding an A+ for consistent A level work, etc. Each of the possible ways of dealing with the A+ grade has its own pros/cons. I use both suggested methods: when grading, my grades were A = 4.3, B = 3.3, C = 2.3, and consistent A level work over the term raises an A grade to A+.

The other, relatively minor, practical issue with this method of grading is that you need to have a clear rubric that breaks down the factors that make an answer a Fail, Unsatisfactory, Satisfactory, Good, or Excellent. This is just a matter of adapting a rubric you already have or building a rubric based on whatever criteria you have been using

for numerical grading. In my opinion, especially since this grading method is so different from how most of the students have been assessed in the past, the students need to have a copy of the rubric so that they know how they will be graded. They need to be able to rationalize the holistic grade because a holistic grade may be less intuitive to them than a series of deductions for specific errors like they have seen in previous courses.

In addition to the practical, how-do-I-actually-implement-this issues noted above, there are all the usual caveats to any grading system. You have to consider how this system fits into your departmental/faculty/university rules around grading, how the system may disadvantage certain demographics, etc.

One final thing to consider is that I implemented these changes mostly during the COVID pandemic and CHEM 1041 was conducted entirely online during 2020 and 2021. I will need to check to see if a return to in-person classes causes the distributions to change.

Using Wikipedia for Good – Students as Knowledge Creators

Alex Goudreau, Science & Health Sciences Librarian

We all have our opinions about Wikipedia as a source of information in academic assignments, so I expect some funny looks as I describe getting students to edit Wikipedia as an assignment last winter in *HEAL2003 Methods in Health Research and Information Literacy*. We know Wikipedia is a go-to information source for many people, but the main lesson students learn from their high school teachers and some university instructors is that it's not credible because anyone can edit it, the quality of cited sources is questionable, and so don't use it. I wanted to get students to think beyond this and consider how they as "anyone" could help improve the quality of information on Wikipedia. I was also interested in trying a non-disposable assignment, or something that adds value to the world outside of academia.

I won't go into it here how Wikipedia is more credible than you might think (see instead this recent article from The Conversation), rather I'll say that students have been editing Wikipedia for class assignments for over 10 years with lots of researchers studying the effect of these types of assessments on student learning. Vetter et al. (2019) discuss the findings of a 2016 large-scale study, conducted by Dr. Zachary McDowell and sponsored by the Wiki Education Foundation, which focused on how learning outcomes for Wikipedia assignments compared to traditional university-level assignments. Results included positive evaluations from students and instructors participating in Wikipedia-based assignments, and the authors found these assignments were useful for teaching students academic skills such as critical thinking, research and synthesizing information, public writing, evaluating sources, and peer review. It was with this research and other Wikipedia assignment examples in mind that I forged ahead with my own assignment experiment.

The HEAL2003 Wikipedia assignment was worth 10% of students' overall grade, and the class was divided into 6 groups to complete parts of the assignment both as a group and individually. I adapted the assignment from Wikipedia:CARL Medical Editing Initiative Fall 2020 assignments and provided students access to the Wikiedu training resources to work through at their own pace and as needed.

After introducing the assignment in class with a discussion around the article, *"Situating Wikipedia as a health information resource in various contexts: A scoping review"*, groups were expected to either find a Wikipedia article on their own or pick from a list of articles I'd identified. Articles had to be health-related and needed to have enough edits to be made (adding or updating citations) so each group member could contribute. Students completed the assignment in three parts with due dates throughout the term, and additional instruction was provided in class by the librarians to complement these parts:

Part 1 – students selected a Wikipedia article and responded as a group to questions provided. This was ungraded and a mandatory submission.

Part 2 – students individually performed literature searches to each find one citation to improve the group's assigned Wikipedia article. They described their search process and explained why they chose their source. Grading for Part 2 was marked out of 4 using this rubric: 2 for appropriateness of search strategy, 2 for a clear rationale for why this resource was the best choice. Submissions were individual.

Part 3 – students submitted as a group their improvement plan for their chosen article. They had to explain their planned changes, including adding/updating citations and/or editing/adding text to the article itself. After each proposed change, they briefly explained the rationale for making the change. Then they provided a brief evaluation of the quality of the research sources they used, identifying any issues or concerns (including any possibility of bias), and explaining how (or whether) this impacted their plans for the information they choose to share. Grading for part 3 was out of 6, with a rubric provided to outline what was expected.

Students chose the following articles to update:

- Social determinants of health

- Adherence (medicine)

- Organ donation

- Attention deficit hyperactivity disorder management

- Lactose intolerance

- Botulinum toxin

After a few technical hiccups and learning curves (e.g. trying and failing to use OneNote's Class notebook, navigating the WikiEd Course Dashboard I created which spammed students with email reminders) students completed the different parts, and were given class time to make their Wikipedia edits if they chose. Overall grades for the assignment were good and I was pleased with the students' work. I'll likely try this assignment again this winter with some changes to the process. I didn't get as much feedback from students as I'd liked. I wanted to know whether they found this to be a valuable exercise in critically evaluating research sources, being active participants in a knowledge creation process, and seeing how editing Wikipedia isn't actually a "free for all", that there are policies and guidelines in place to direct best practices. Next time I'll directly ask for student feedback. I also want to further encourage students to use more open access sources in the future and make the connection with how editing Wikipedia articles helps the encourage knowledge translation and ensures more equitable access to quality information.

If you'd like to explore Wikipedia assignment options for your own classes, there are a lot of resources out there, and I'd be happy to chat more about my experience. There are also different Wikipedia projects to join (e.g. WikiProject Women's Health), with identified articles requiring new or updated citations, and indicating urgency for updates based on how often articles are accessed by people.

Here are a few resources to get you started:

- [Teach with Wikipedia](#)

- Using Wikipedia Assignments to Teach Critical Thinking and Scientific Writing in STEM Courses. https://doi.org/10.3389/feduc.2022.90577

- [What are possible Wikipedia assignment designs?](#)

- [TEACHING WIKIPEDIA: A MODEL FOR CRITICAL ENGAGEMENT WITH OPEN INFORMATION](#)

- Join an edit-a-thon! The National Library of Medicine hosts virtual events twice a year with their [#CiteNLM Wikipedia Edit-a-thon](#)

- Get involved in the [Cochrane/Wikipedia partnership](#) to incorporate more evidence-based research into Wikipedia's medical articles

Resources on Assessment and Grading from UNB Libraries and Across the Internet

Kohn, A., & Saffel, T. (2020). *Ungrading: Why rating students undermines learning (and what to do instead)* (1st ed.). West Virginia University Press. https://unb.on.worldcat.org/oclc/1200197206 (ebook)

Nolan, S. A., Hakala, C., & Landrum, R. E. (Eds.). (2021). *Assessing undergraduate learning in psychology: Strategies for measuring and improving student performance*. American Psychological Association https://unb.on.worldcat.org/oclc/1145912365 (ebook)

Guskey, T. R., & Brookhart, S. M. (Eds.). (2019). *What we know about grading: What works, what doesn't, and what's next*. ASCD. https://unb.on.worldcat.org/oclc/1079412085 (ebook)

Dueck, M. (2021). *Giving students a say: Smarter assessment practices to empower and engage*. ASCD. https://unb.on.worldcat.org/oclc/1198988918 (ebook)

Grainger, P., & Weir, K. (2020). *Facilitating student learning and engagement in higher education through assessment rubrics.* Cambridge Scholars Publishing. https://unb.on.worldcat.org/oclc/1137017462 (ebook)

Teaching and Learning in Higher Education. (n.d.) *Assessment strategies*. Queen's University. https://www.queensu.ca/teachingandlearning/modules/assessments/index.html

Bayraktar, B. (18 August 2020). *Tip: Research paper alternatives*. Tips for Teaching Professors. https://higheredpraxis.substack.com/p/tip-research-paper-alternatives

SUNY Plattsburgh Center for Teaching Excellence. (n.d.) *Alternatives to timed exams & quizzes*. Google Drive. https://docs.google.com/document/d/1ikwRKvMMnoqpM-dDIbiOV0kjEzBNDS4OOqT6rlGrs3Q/edit?usp=sharing

Munroe, T. (14 July 2020). *Building on learning science I created an assessment menu for my students. Here's how it went.* Connecting with science. https://connectingwithscience.org/2020/07/14/building-on-learning-science-i-created-an-assessment-menu-for-my-students-heres-how-it-went/

Stommel, J. (6 February 2020). *Ungrading: an FAQ.* https://www.jessestommel.com/ungrading-an-faq/

Buck, D. (21 December 2020). *Crowdsourcing Ungrading*. Pressbooks. https://pressbooks.howardcc.edu/ungrading/

Special issue on teaching history with the unessay. Teaching history: A journal of methods. Vol. 47 No. 1. 2022-11-09. https://doi.org/10.33043/TH.47.1

Moss, J. (n.d.) *Non-disposable assignments and why you should use them*. Open Education @ UAF. https://open.uaf.edu/non-disposable-assignments-and-why-you-should-use-them/#:~:text=David%20Wiley%20coined%20the%20term,and%20faculty%20complain%20about%20grading.

Scott, C. (27 June 2022). *Students as Content Creators through Non-Disposable Assignments (NDAs)*. Oregon State University. https://blogs.oregonstate.edu/inspire/2022/06/27/students-as-content-creators-through-non-disposable-assignments-ndas%EF%BF%BC/

Reflective Practice and Experiential Learning

Sarah King, Director, UNB Office of Experiential Education

<u>Why Include Reflection?</u>

A key component of experiential learning is to ensure that each student is given a chance to think deeply about what they are doing and what the activity means to them. Reflection is what takes experiential learning from simple experience to deeper learning. It is the glue that brings together the academic and experiential learning that happens in community service learning. When building an experiential learning opportunity, it is important to build in opportunities for students to express their learning and build reflective practice. This form of reflection may not be a part of every instructor's own background, and this article provides: 1) an overview of the practises, 2) models for reflection, and 3) assessment processes and rubrics that can be employed when designing a reflective writing assignment.

1. **<u>Reflective Practices:</u>**

Reflection is critical thinking that supports learning objectives by encouraging students to make astute observations, to demonstrate inductive or deductive reasoning skills, and to consider multiple viewpoints, theories, and types of data.

Reflection allows students to think more deeply about the activity they are undertaking and leads them to:

- make connections between the course content and their experiences in the community
- think critically about the ethical dimensions of their community engagement
- place their learning in a larger context
- relate their learning to personal values, beliefs, and perspectives
- connect their experience to personal and professional plans and journeys
- foster lifelong learning skills

When your course involves an experiential learning component, students should be engaged in both *formative* and *summative* forms of reflection, which should form the basis for the assessment of the community experience. Students can use many different formats for their *formative* reflective practice including journals, interviews, simulations, role-playing, reflective discussions (class-room based or online) and photo, voice, or other creative forms of documentation and interpretation. As the students more toward

their final *summative* reflective practices, they could develop reflective essays, portfolios, reports, presentations, or even performances. But the key point is to continue to encourage students to think deeply about their own learning experiences and to encourage them to encounter the multiple domains that experiential learning involves.

2. **Models for Reflection:**

Several models exist that help us understand the different aspects of reflection. The following different models differ at key points, but each one helps us appreciate the different aspects of the reflective process. Instructors might find below a model that fits their discipline and the experience they are designing for their course:

Rolfe's Refection Model (Rolfe, 2001):

- What?

    - What happened: brief description of the activity

- So What?

    - What did you learn from the activity?

    - What concepts, theories, knowledges, practices did you apply throughout the activity? How would it have been different if you had used different theories?

    - What other issues or broader ideas arise from the situation?

    - What does this activity teach me about me/others/our relationship/my profession/my field of study?

- Now What?

    - What would/will I do differently next time in a similar situation?

    - What do I need to do to improve my skills before encountering a similar situation?

    - What broader issues need to be considered if I engage in this work again?

Gibbs' Reflective Cycle (Gibbs, 1988)
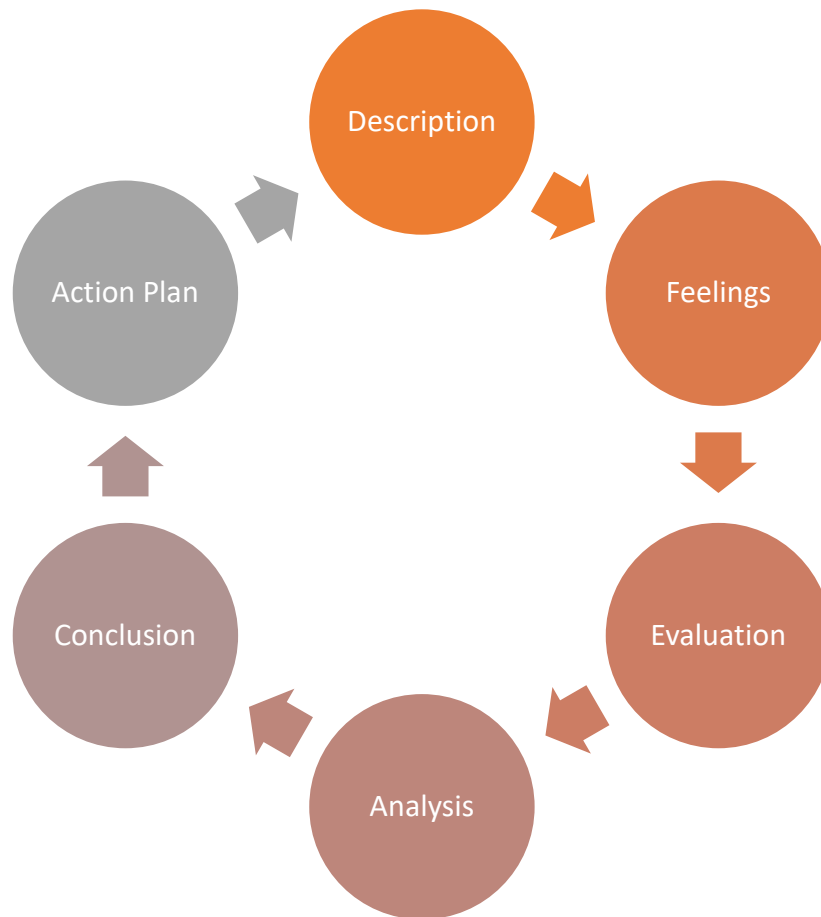
- Description – What happened?
- Feelings – What were you feeling and thinking?
- Evaluation – what was good and bad about the exercise?
- Analysis – What sense can you make of the situation?
- Conclusion – What else could you have done?
- Action Plan – If it arose again, what would you do?

Reflection can occur in multiple domains:

- Cognitive: what knowledge or skills did you gain?
    - o Did your understanding of the materials/concepts improve throughout the experience? How?

- o How would the experience have changed if you had used a different approach?

- o How has your experience related to the readings, discussions, lectures, and previous knowledges?

- Affective: how has this experience changed your attitudes or approaches?

  - o What values, beliefs, opinions were challenged or confirmed for you? How did those values, beliefs, or opinions influence the experience?

  - o Describe what you have learned about yourself because of your experiential activity.

- Process: what did the process teach you?

  - o What expectations did you have about the activity? How have those changed?

  - o What types of roles did you take on during the activity? What did that role teach you?

  - o How does the activity relate to your long-term goals?

  - o Did anything surprise you during the activity? What?

  - o What would you like to change about your participation in the activity?

Effective reflection on experiential learning should:

- Go beyond description and encourage students to interpret and analyse their experience

- Ask students to apply new information gained through their experience to real-life problems and situations

- Encourage students to document and reflect on the learning objectives from the course

	Learning Objective	Connection	Learning Activities	Reflection
	I want to work on this skill/competency	This is why I want to learn it	This is how I might learn it	What I learned by doing
1.				
2.				
3.				

Eyler, Giles and Schmiedes' (1996) book, *A Practitioner's Guide to Reflection in Service-Learning* identifies "The 4 Cs of Reflection":

- o <u>Continuous</u> in time frame. an ongoing part of the learner's education and service involvement, this allows students to formulate new ideas following Kolb's Cycle of Learning

- o <u>Connected</u> to the intellectual and academic needs of those involved. This is where the connection between real life experiences and course material are compared and become relevant.

- o <u>Challenging</u> to assumptions and complacency. Reflection must challenge students and provoke thought in a more critical way.

- o <u>Contextualized</u> in terms of design and setting. Faculty determine if the reflection is appropriate for the context of the service-learning experience, thus adding to the linkage between thinking about course content and applying it.

***Bringle and Hatcher*:**

Julie Bringle and Robert Hatcher's (1999) "Reflection in Service Learning: Making Meaning of Experience" is an excellent resource for guiding the development of reflective activities in experiential learning.

3. **Assessing Reflection in Experiential Learning:**

For faculty members new to experiential learning and reflective assignments, the assessment of these activities can be daunting. However, assessing reflective assignments reinforces their value in the experiential learning process and helps provide formative feedback for students on both their reflective skills and the learning objectives for the experiential learning activity.

In addition to providing qualitative feedback, quantitative assessment of these reflections can be facilitated using rubrics.

Rubric Examples:

Journal Assessment Rubric Example (Chabon et al, 2006):

Level 1 – Descriptive	Students demonstrate acquisition of new content from significant learning experiences. Journal entry provides evidence of gaining knowledge, making sense of new experiences, or making linkages between old and new information.
Level 2 - Empathetic	Students demonstrate thoughts about or challenges to beliefs, values, and attitudes of self and others. Journal entry provides examples of self-projection into the experiences of others, sensitivity towards the values and beliefs of others, and/or tolerance for differences.
Level 3 - Analytic	Students demonstrate the application of learning to a broader context of personal and professional life. Journal entry provides evidence of student's use of readings, observations, and discussions to examine, appraise, compare, contrast, plan for new actions or response, or propose remedies to use

	in and outside of structured learning experiences.
Level 4 - Metacognitive	Students demonstrate examination of the learning process, showing what learning occurred, how learning occurred, and how newly acquired knowledge or learning altered existing knowledge. Journal entry provides examples of evaluation or revision of real and fictitious interactions.

Critical Reflection Rubric Example (Chabon et al 2006 and Kember et al, 2008):

	Critical Reflection	Reflection	Understanding	Habitual Action/Non-reflective
Reflecting on existing knowledge	Critically reviews existing knowledge, questions assumptions, and articulates new perspectives as a result of experience	Active and careful consideration of existing knowledge and articulates new understanding of knowledge as a result of experience	Makes use of existing knowledge without an attempt to evaluate/appraise knowledge; demonstrates understanding but does not relate to other experiences or personal reaction	Automatic/superficial responses with little conscious/deliberate thought or reference to existing knowledge; responses are offered without attempting to understand them
Connection to academic concepts	Demonstrates superior connection between experience and class content (concepts/theories) and literature; evidence of application of theory and	Demonstrates clear connections between experience and class content (concepts/theories); evidence of application of theory	Connects experience with class content (concepts/theories) but remains superficial or abstract	Connections are not drawn between experience and class content (concepts/theories) or literature

	reconstruction of perspective			
Evidence of development	Articulates transformation of their perspective of themselves or about a particular issue/concept/ problem as a result of experience	Articulates new understanding/insights about self or particular issue/concept/ problem as a result of experience	Limited/superficial insight about self or particular issue/concept/ problem as a result of experience	No evidence of insights about self or particular issue/concept/ problem as a result of experience

Reference List

Bringle, Robert G. & Hatcher, Julie A. (1999). "Reflection in Service Learning: Making Meaning or Experience." *Evaluation/Reflection,* 23. https://digitalcommons.unomaha.edu/slceeval/23

Chabon, S. & Lee-Wilkerson, D. (2006). Use of journal writing in the assessment of CSD students' learning about diversity: A method worthy of reflection. *Communication Disorders Quarterly*, 27(3), 146-158. https://brocku.ca/pedagogical-innovation/wp-content/uploads/sites/ 3/Critical-Reflection-Rubric.pdf

Eyler, Giles & Schmiedes. (1996). "The 4 Cs of Reflection." *A Practitioner's Guide to Reflection in Service-Learning: Student Voices and Reflections,* Vanderbilt University, Nashville, Tennessee. 16-20. https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKEwi Il7SG3Pb7AhUoGFkFHes3DnsQFnoECA0QAQ&url=https%3A%2F%2Fwww.umassd.edu%2F media%2Fumassdartmouth%2Fleduc-center-for-civic-engagement%2Fservice-learning-readings%2Fpractitioners-guide-to-reflection-in-service-learning.pdf&usg=AOvVaw16nsMfgVpVslwEP4b_-Pga

Gibbs G (1988). *Learning by Doing: A guide to teaching and learning methods*. Further Education Unit. Oxford Polytechnic: Oxford.

Kember, D., McKay, J., Sinclair, K., Kam, F., & Wong, Y. (2008). A four-category scheme for coding and assessing the level of reflection in written work. *Assessment & Evaluation in Higher Education*, 33(4), 369-379. https://www.tandfonline.com/doi/pdf/10.1080/02602930701293355?needAccess=true

Rolfe, G., Freshwater, D., & Jasper, M. (2001). *Critical reflection in nursing and the helping professions: a user's guide*. Basingstoke: Palgrave Macmillan.

INTERESTED IN UPCOMING EVENTS?

The UNB Saint John Teaching and Learning Centre in collaboration with the Centre for Enhanced Teaching and Learning (CETL) will be hosting several events both online and in-person in Winter 2023. CETL also is running several training sessions throughout the winter semester. Information is forthcoming, but a list of sessions and to register, you can visit: https://www.unbtls.ca/events/#CETL