Evaluation of Post-Secondary Teaching Using Student Evaluations of Teaching (SET): Developing and Pilot Testing a New Survey – the Student Learning Experience Survey (SLES)

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This work was brought to fruition in response to the 2019 MUFA report and has been developed with ongoing guidance from MUFA, in collaboration with:

- The office of the Vice Provost, Teaching and Learning
- The Paul R. MacPherson Institute for Leadership, Innovation and Excellence in Teaching (MacPherson; MacPherson Institute)
- The Institutional Research and Analysis Office (IRA)
- Information Technology, Humanities Media and Computing
- The Faculties of: Engineering, Humanities, Social Sciences, Health Sciences, and the Arts & Sciences Program

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The McMaster University Faculty Association (MUFA) has been such an active agent in identifying the local and broader issues with SET as relevant to the McMaster community. The work they coordinated and supported has made it possible to move toward developing a new course evaluations survey – the Student Learning Experiences Survey (SLES) – the work described within this report.

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Those who have formally engaged with the project of reimagining the SET survey are listed below, but there are many more that were invested in talking through SET with me through other related projects or informally.

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Table of Contents

Executive Summary

At McMaster University, student evaluations of teaching (SET) inform high-stakes tenure, permanence, & promotion (TP&P), as well as career progress & merit (CPM) decisions – impacting instructors and the student learning experience. The current Canadian landscape is characterized by significant tensions and mistrust in SET tools, the validity of their data, and whether use of that data is ethical. This report provides an overview of work that has been undertaken, in response to the 2019 McMaster University Faculty Association's (MUFA) report highlighting issues with McMaster SET policies and practices. This project began in January of 2021 and continues into the Fall of 2023. The purpose of this work was to address the findings and recommendations from the 2019 MUFA report and reimagine the focus of SET, their place in TP&P, the professional development of instructors and faculty members, and the student learning experience.

In this report, I provide an overview of:
- SET in the McMaster context
    - McMaster in relation to the Canadian SET landscape
- Methods of survey development
    - Local, national, and international iterative and ongoing consultations
    - Survey design in partnership
        - Mapping the survey questions onto McMaster and research literature priorities
    - The two pilot tests and resultant changes to the survey

The focus of this report will be on the recommendations stemming from this work – recommendations that build on or highlight those made by MUFA in their 2019 report.

How to Evaluate Teaching Effectiveness – Contextualize SETs

To ensure that an instructor is supporting in the development of their teaching knowledges and ways of doing – and ultimately ensure that students experience learning in a good way, it is important that the following are implemented with complementarity and are proportionally valued/weighted:

1. Peer evaluations – developmental process
2. Teaching dossiers
3. Mid-term feedback from students about their experiences and needs
4. Use SETs to measure student learning experience and support instructor professional development (PD)
    - Define teaching vocabulary and expectations
        - SET questions align with institutional priorities for teaching and learning
    - Knowledge mobilization campaign
        - By institution, supported by activities by administrators, instructors, and with support from the student union
        - Educate all who engage with SET (i.e., chairs/deans, instructors, students)
            - Purpose, process, how to give constructive feedback, interpretation

- Increase response rates to ensure use of data is ethical
- Expand use of SETs to formative – or make them solely formative (currently summative)
- Contextualize the data
- Implement a measure that is valid and reliable for: students, instructors, and administrators
  - SET instrument evidence-based and meets psychometric rigor
  - Develop guides for implementation, interpretation, and application for all three stakeholder groups
    - Policies and procedures are consistent relating to administration, dissemination (audience specific presentation), access, interpretation, application, and storage
  - Develop supports for instructors re: interpret data and develop work plans to address areas of need and recognize strengths

2019 MUFA Report Recommendations

Here, I highlight recommendations from the 2019 MUFA report that informed the goals of the work described in this report to develop the SLES.

- Formative (mid-term) evaluations [instructor level]
  - Goal: Responsive instruction
- Summative (end of term) evaluations [course level]
  - Goal: Improve / Replace / Validate SET instrument
    - Make sure it is valid (assess validity) and results presented relevant e.g., professional development of teaching, constructive feedback, personnel decisions
  - Goal: Define strategy for using student input on teaching
    - Must serve McMaster's teaching and learning mission
  - Goal: Must meet McMaster community's definition of 'high quality teaching'
  - Goal: Define implementation of SET
- Participation rates
  - Increase to 60-70% institution wide
- Goal: Diversity of respondents
- Goal: Increase to strong uptake – increase statistical strength of results
- Goal: Accessibility [EDI+]
- Goal: Transparency of process and access to results
- Goal: Compare pool to population (demographics+: gender, age, grades/GPA, student group, etc.)

Recommendations + Concurrent and Consecutive Considerations Toward McMaster-Wide Implementation of the SLES

Here, I provide an overview of the recommendations you can find beginning on page 18 of this report. Below, the numbered items list my three primary recommendations followed by

concurrent and consecutive considerations for McMaster-wide implementation and support of the SLES.

Recommendations

1. **Implement the SLES McMaster-wide**
2. Implementation should be **at the mid-point of the term**, rather than at the end of term
   o **Release data directly to instructors**
      ▪ And a summary to their chair/dean
3. **Interpret all quantitative scaled results according to percentage** of positive or negative sentiment selections or a percentage of frequencies (the two scaled options provide either sentiment or frequency response options)
   o That is, **scaled responses should not be distilled down to a score or average**

Concurrent and Consecutive Considerations

- **Policy** changes to support appropriate administration, interpretation, and use of the SLES tool and its data
  o How to **integrate meaningfully into a larger evaluation of teaching (EoT) plan** (consider a more developmental approach) – with supports
  o Working toward **culture change** and emphasizing more and other evidence toward TP&P and CPM
     ▪ Emphasize the professional development journey of instructors (formative over summative)
        • Make sure the survey has a holistic place and use in TP&P
           o Deemphasize SET as primary means of evidence in TP&P
           o Weighting of SET as evidence in TP&P is adjusted in relation to (proportion to be determined) teaching portfolios, peer evaluations, and other ranked evidence
     ▪ Emphasize Student learning experience (SLE) – student voice is valued and integrated
        • The survey should help students reflect on their own active engagement in their learning (Encourage students to actively engage with, and reflect on their learning)
        • The survey should scaffold students in providing constructive feedback
     ▪ Amplify marginalized voices
        • Engage with historically marginalized student and instructor groups to continue to improve our SET tools and processes to account for the diverse lived experiences and experiences (equity, diversity, inclusion, accessibility, and decolonization; EDIAD)
  o **Administration** – consider whether to administer SLES according to instructor need – rather than administering the SLES for every instructor for every course every year
     ▪ Perhaps allow instructor to select when to administer the SLES and when to opt out to:

- Encourage risk taking and innovation in teaching and learning without high stakes penalty
- Reduce survey fatigue for students
  - **Interpretation**
    - Interpret all quantitative scaled results according to percentage of positive or negative sentiment selections or a percentage of frequencies (the two scaled options provide either sentiment or frequency response options)
      - Scaled responses should not be distilled down to a score or average
- **Increasing engagement and value**
  - There needs to be collaboration between student unions, MUFA, students, instructors, chairs/deans, the Office of the Vice Provost, Teaching and Learning, the MacPherson Institute, and the Office of Institutional Research and Analysis to implement supports and a knowledge mobilization campaign
  - E.g., participation rates, interpretation and application, reflection, instructor and student development
- **Supports** for stakeholders involved in one or more of the above processes:
  - Students, instructors/faculty, administrators, TP&P committees
  - Diversity of modalities for engagement and accessibility
  - Peer to peer engagement and support (for students and instructors)
  - How to engage with students on re: SET and build into teaching practice, ongoing conversation rather than one time point
- **Ongoing SET development**
  - Need to test the survey as we gather more data over time for reliability and validity and continue to do consultations with community – particularly chairs, instructors, and students regarding feelings/experience of the survey, interpretation and use of its data
- **Data ownership and governance considerations / policies**
  - Who owns the data?
    - Ideally, raw data and reports should belong to the instructor and a summary of student sentiment and frequency responses should be shared with an instructor/s chair or dean
  - Who holds/stores the data?
    - The Office of Institutional Research and Analysis
  - Who has and can have access to the data?
    - To be determined by policy who owns data, who governs it, and who can have access and by what channels for any research purposes
- **Knowledge Mobilization (KM) campaign** to increase awareness, understanding, participation rates, constructive feedback
  - Create a video with script for multiple modes of access giving an overview of the purpose, implementation, and changes from old survey to new
    - Make all resources available in the same space
      - Consider making all resources available on evals.mcmaster website and maybe also in Avenue

- o Refer to infographics and guides that student partner Nikita Kalwani put together
- **Collaborate** with:
  - o Faculty of Science Machine Learning & SET group and the Office of the IRA on the qualitative/text analytics
    - Validity and ease of ability to analyze qualitative comments
  - o McMaster Students Union
    - Continue to engage the student voice – make them feel heard and increase investment
  - o Look into Explorance Blue's emerging Machine Learning package – much of what they have recently described doing with this work is very similar to the work our colleagues in the Faculty of Science and the Office of the IRA are striving for

The appendices of this report provide more detail about the survey development process including mapping the SLES questions onto research literature (basis of evidence) and McMaster policy and strategy documents, as well as the latest version of the survey.

Situating the Researcher and This Work

As a researcher I bring my own perspectives and lived experiences to all stages of the work, from project design to relationships and interactions with stakeholders and participants, interpretation, and reporting. I identify as a highly educated, White, middle class, cisgendered female with training and professional experience in the fields of developmental psychology, education, and measurement. In addition to the impact of my own social location, this work is situated at McMaster University, a post-secondary institution in Southern Ontario, Canada. The local and national contexts have determined what is prioritized herein.

Background

Student evaluations of teaching (SET) have long been used in universities to inform high-stakes decisions impacting tenure, permanence, and promotion (TP&P) outcomes for instructors (Goos & Salomons, 2017; Gravestock & Gregor-Greenleaf, 2008; Magel et al., 2017) as well as career progress & merit (CPM) decisions – impacting instructors and the student learning experience. In the current Canadian landscape, there is significant tension surrounding, and mistrust in the validity and use of SET tools and data (Ahmad et al., 2017; Gravestock & Gregor-Greenleaf, 2008; Gravestock et al., 2009; Grignon et al., 2019; Grose, 2017; Hoessler & Turner, 2016; Hum et al., 2021; McNenly, 2019; Ryerson University v Ryerson Faculty Association, 2018; Spooren, Brockx, & Mortelmans, 2013; Wright et al., 2014; Zdjelar, 2018). These tensions were exacerbated in the wake of the Ryerson Decision (Ryerson University v Ryerson Faculty Association, 2018), which is often cited as a reason to eliminate SETs altogether. There is a common misconception that the Ryerson Decision was an indictment of SET, however the arbitrator's decision recognizes that well conducted SET are possible and can be effective (G. Hum, personal communication, September 17, 2021) – and that the issues with SET at Ryerson (now Toronto Metropolitan University, TMU) were specific to the TMU context, cautioning against generalizing beyond TMU.

In 2019, the McMaster University Faculty Association (MUFA) published a report (hereafter referred to as the MUFA report) based on an extensive review of the research literature across disciplines – including the arbitrator's report for the Ryerson Decision, as well as community consultations and town halls. A significant concern emerging from the Ryerson Decision that MUFA identified as relevant to the McMaster context relates to the use of quantitative summary questions and ordinal responses treated as cardinal. MUFA felt that this concern would need to be addressed as we move forward with any work to address concerns and improve the tools we use to understand and support the student learning experience as well as the professional development of its instructors' teaching.

The MUFA report revealed that, in the McMaster context, SETs are not a valid measure of teaching effectiveness and are biased – particularly against women & minorities (Grignon, et al., 2019). At McMaster, Faculties make use of individualized versions of the SET survey. All versions of the survey in use have a number of questions, including the policy mandated question one (Q1) that provides an overall score out of 10 ranking an instructor – more recently providing an overall score out of 10 ranking a student's learning experience in the course. It is

this Q1 that is used as evidence of 'teaching effectiveness' in high stakes personnel decisions. The use of data from one question is troublesome; the literature is clear that, "no single question can accurately measure teaching effectiveness." (Grignon, et al., 2019, p.1). Whether and how the remaining survey data collected is interpreted and applied varies greatly. The MUFA report also revealed that students are disillusioned about SET – they don't trust that their responses are valued or addressed and this impacts response rates, which are low. The institutional average is a 15-20% response rate. In combination with a low response rate yielding sample sizes that are not interpretable, non-responses are not at random and represent a larger proportion of the population, or selected sample of students – meaning a strong selection bias exacerbated by low response rates. All of which, as MUFA points out, calls into question whether it is ethical to use Q1 SET data for high stakes personnel decisions. In addition to student concerns, MUFA also shared in their 2019 report that there is a lack of trust in the process and data among instructors; indeed some even reject hearing from students in this format due to the issues with discrimination and comments that are not constructive.

An important shift has occurred at McMaster, and indeed across Canadian universities, to change the focus of student feedback. The language of Q1 has changed from asking students about the 'overall effectiveness of the instructor' to 'overall experience of learning'. Though this change was made at McMaster, there was no accompanying campaign to inform students and instructors of the change and what it meant for how to respond to the SET survey going forward.

Methods: Survey Development

In response to the 2019 MUFA report (Grignon, et al., 2019), it was decided that a post-doctoral fellow would be hired to develop, pilot test, and refine a new SET survey, in consultation and collaboration with the McMaster community. The new survey would focus on instructor professional development and the student learning experience while also trying to address identified issues with SET.

A Co-Journey of Development
Developing a new SET survey for the McMaster community has been a co-journey of reimagining its purpose, implementation, and the use of SETs at McMaster. It has involved ongoing and iterative processes of:
- Reviewing research literatures and other media (e.g., Rate My Professor)
- Consulting with experts in measurement, teaching and learning (T&L), as well as equity, diversity, inclusion, accessibility, and decolonization (EDIAD)
- Conducting a national scan of the SET landscape (SET professionals, students, instructors / faculty, administrators)
- Consulting with McMaster community members / stakeholders
- Consulting / partnering with MUFA

As the post-doctoral fellow responsible for developing a new SET survey for McMaster, I was supported in this work by MUFA and an Advisory Committee (AC) formed by:

- The lead on the 2019 MUFA report – Michel Grignon was MUFA President at the time of the work and reporting for the 2019 MUFA report and former President during his time on the AC for this work
- The Directors of the:
  - Paul R. MacPherson Institute for Leadership, Innovation and Excellence in Teaching (MacPherson Institute) – Lori Goff
  - Office of Institutional Research & Analysis (IRA) – Joanne Gittens
  - Information Technology, Faculty of Humanities (IT) – John Bell
- The Vice-Provost, Teaching and Learning (VPTL) – Kim Dej

SET Survey Development Purpose

Survey development has been informed by the priorities identified in the 2019 MUFA report as well as those identified by local, national, and international community members interacting with SETs, and the research literature. The goal has been to develop a new survey tool that:

1. Centers the professional development (PD) journey of instructors
- Make sure the survey has a holistic place and use in TP&P (rather than serving as the primary / singular means of evidence of teaching effectiveness)
  - Weighting of SET as evidence in TP&P is balanced with teaching portfolios, peer evaluations, and other ranked evidence
- Make sure the survey supports instructors' engagement in formative PD
2. Centers the student learning experience (SLE)
- Student voice is valued and integrated in T&L
- Supports building relationships between students and instructors that scaffold their development
3. Helps students reflect on their own active engagement in their learning
- Encourage students to actively engage with, and reflect on their learning
4. Scaffolds students in providing constructive feedback
- Provides a means for instructors to gather constructive feedback about the learning experiences of students within their courses
5. Marginalized voices
- Considers historically marginalized voices by acknowledging the diverse lived experiences and experiences (equity, diversity, inclusion, accessibility, and decolonization; EDIAD) in how the questions are designed
6. Aligns with McMaster's 2021 Partnered in T&L Strategy and community-identified priorities
7. Increases engagement and value
- E.g., participation rates, interpretation and application, reflection, instructor and student development
- Ensures ease of use to respond to the survey questions as well as analyze and interpret the results

Survey Development and Pilot Testing Cycles

This project is characterized by two phases:

1. An environmental scan, project design, and preparing to test survey questions
2. Two main survey development, pilot testing, and feedback cycles
    *   See Table 1 for an overview of these cycles

See Appendix B for more information about the Student Learning Experiences Survey (SLES) project timeline and methods of survey development.

Phase 1 – Environmental Scan, Project Design, and Preparing to Test Survey Questions

2021 involved scanning the SET landscape and research literatures, as well as ongoing consultations with subject matter experts, stakeholders, and community members at the local, national, and international levels.

During this time, I also collaborated with my AC, MUFA, McMaster community members and other contributors to finalize the design of this survey development project, as well as the initial large set of questions to be tested in Phase 2: Pilot Test #1.

The large set of questions that I developed for testing in Pilot Test #1 integrated considerations drawn from: the 2019 MUFA report; McMaster's 2021 Partnered in Teaching and Learning Strategy; teaching and learning centre resources from the University of Toronto and University of Ottawa; an EDIAD publication from the Elementary Teachers' Federation of Ontario; and an unpublished report by McMaster's Course and Teacher Evaluation Committee. These resources, in addition to the results of the environmental scan helped to identify and refine questions relevant to the McMaster community and its concerns/needs for Pilot Test #1.

Phase 2 – Survey Development, Pilot Testing, and Feedback Cycles

In the ***Winter 2022*** term, the large question set was pilot tested with six instructors and their students in a course of their choosing (Pilot test #1). Instructors were invited to participate on the basis of having previously high SET survey response rates. While every effort to ensure a representative spread of Faculties was made, ultimately selection came down to highest SET response rates and willingness to participate. No Faculty was deliberately excluded.

Incorporating an evidence-based approach and integrating the feedback of participating instructors and their students, as well as a separate student focus group (and the ongoing and iterative community consultations), questions of benefit/value to instructors and students were identified resulting in an 18-question survey, i.e., the Student Learning Experience Survey (SLES). The SLES included the policy mandated Q1 alongside quantitative scaled and short answer questions designed to scaffold reflective and constructive input about a student's learning experience.

In the ***Winter 2023*** term, the 18-question SLES was pilot tested with six instructors and their students in a course of their choosing (Pilot test #2). Instructors from Pilot 1 were invited to

participate; four of the six Pilot 1 instructors expressed interest in participating in Pilot 2, though one withdrew before Pilot 2 began. An additional three instructors were invited based on recommendations from my Advisory Committee and agreed to participate.

Student and instructor feedback has been analyzed and the SLES has been further refined to 15 questions. I have also worked iteratively with MUFA, the Office of the IRA, and my student partner Manahil Iftikhar to further adjust the questions so that they make the best use of the current survey administration platform (i.e., Blue by Explorance).

Table 1
Overview of Pilot Tests 1 and 2

	Length	Administrations	Platform	Participants	Data Sources	Goals
Pilot Test #1 – Winter 2022	The long measure – testing questions	1. Mid-term (formative) 2. End-of-Term (summative)	Qualtrics	6 courses – 1 each in: • Humanities • Social Sciences • Engineering • Health Sciences • Health Sciences BHSc • Arts & Science *Participants - instructors with higher SET response rates + their students	1. Pilot – Student responses (response rates, trends, survey feedback) 2. Pilot – Instructor feedback 3. Separate student feedback group • In-depth examination of questions, structure, what's missing/not needed 4. IRA team – Qualtrics 5. Ongoing input from McMaster and broader community via consultations / conversations / research	Design questions that are evidence based and identify what matters to students & instructors • Which questions to prioritize for SLE & PD • Response rates and trends • Usefulness of data reported and how • Administration / implementation concerns • 2019 MUFA report recommendations
Pilot Test #2 – Winter 2023	18 questions (including mandated Q1)	1. Mid-term (formative) 2. End-of-Term (summative)	Blue by Explorance	6 courses: • Engineering (1) • Health Sciences (1) • Humanities (1) • Social Sciences (3) *Participants - instructors + their students • 4/6 Pilot 1 participants expressed interest in participating in Pilot 2	1. Pilot – Student responses 2. Pilot – Instructor feedback 3. IRA team – Blue 4. Ongoing input from McMaster and broader community via consultations / conversations / research	

Pilot 2: About the SLES

The Pilot 2 SLES included quantitative scaled and structured qualitative short answer questions that address the seven purposes outlined on page nine of this report (see the section entitled: SET Survey Development Purpose), with an emphasis on:

1. Making sure the survey supports instructors' engagement in formative professional development (PD)
   a. Provides a means for instructors to gather constructive feedback about the learning experiences of students within their courses
2. Helping students reflect on their own active engagement in their learning and provide constructive feedback
3. Supports the development of constructive and iterative relationships between students and instructors

The Pilot 2 SLES had 18 questions, organized by major themes:

- Page 1 – Context & Student Reflection on Engaging in their Learning

- Page 2 – Course Material, Assessments, & Supports
- Page 3 – Skills Developed & Overall Course Experience

Pilot 2 Feedback: Response to the SLES

Overall response to the SLES was positive. Pilot 2 student and instructor feedback provided valuable insights into areas of strength and improvement for the SLES. Students and instructors felt that the SLES encouraged student reflection and responsibility over their learning, while prompting constructive feedback for course improvement and instructor professional development. All instructors indicated they are very likely to use the SLES over the usual SET tools (still currently in use).

Pilot 2 Feedback: About Response Rates

Despite enthusiasm about the SLES being more beneficial for students and instructors, the survey response rates remain low. Instructors noted various strategies they have used to improve response rates (e.g., allocating more class time, announcements/reminders, etc.) but optimizing response rates continues to be a challenge.

Pilot 2: Response Rates

Response rates to the Winter 2023 Pilot test #2 of the SLES are reported in Tables 2 and 3 below. Note that ADMIN 1 refers to the mid-term administration and ADMIN 2 refers to the end-of-term administration of the SLES.

Table 2
Summary of Total Students Invited Versus Surveys Completed and Response Rates by Administration (Mid-Term and End-of-Term)

Pilot 2	Total invited	Total completed	Overall response rate
ADMIN 1	468	72	15%
ADMIN 2	462	124	27%

Note that the response rate for ADMIN 2 (end-of-term) is above the institutional average of ~20%, though it remains below the recommended response rate of 60-70% for useful data (Grignon et al., 2019).

Table 3
Comparing Response Rates for the Six Participating Courses by Administration (Mid-Term and End-of-Term)

Faculty	Course name	Response Rate			
		ADMIN1	ADMIN2	ADMIN 1 -> 2	
Engineering	Mechanical Engineering	23%	82%	59%	↑
Humanities	Latin American Studies	36%	42%	6%	↑
Social Sciences	Community Engagement	10%	46%	36%	↑
	Community Engagement	36%	8%	-28%	↓
	Gender Studies	5%	5%	0%	=
Health Science	Science Communication	9%	5%	-4%	↓
OVERALL		15%	27%		

It is important to note that response rates dropped in Pilot 2, as compared to Pilot 1. This can in part be attributed to the context of the Winter 2023 term; numerous informal conversations with students, staff, instructors and faculty members, as well as administrators highlighted that there was something about this term this year where all experienced a drop in engagement for many learning activities. Regardless, response rates continue to be an important aspect to address to ensure there is a consistent increase across all disciplines and departments. Overall, the SLES has been positively received and supported by the McMaster community members that have engaged with the work as well as by MUFA and senior administration.

After Pilot 2: Refining the SLES

Student and instructor feedback from Pilot 2 was considered and implemented in collaboration with my student partner, Manahil Iftikhar, and in consultation with the IRA, MUFA, and other stakeholders/contributors – resulting in a refined SLES.

The refined SLES has 15 questions, organized by major themes:
- Page 1 – Student Context & Engagement
- Page 2 – Learning & Course Context
- Page 3 – Key Takeaways: Skill Development & Overall Experience

All 15 questions provide students one of three response options:
1. A frequency response scale (5 points: Always to Never)
2. A sentiment response scale (5 points: Strongly Agree to Strongly Disagree)
3. A list of response options where they may select one or all that apply

The number of short answer questions has been reduced since Pilot 2. The refined SLES now has five questions that offer an optional short answer format for students to elaborate on their choice. The policy mandated Q1 is the final question on the SLES; the question continues to be

worded as outlined in policy and it requires students to respond by selecting an overall feeling (5 points: Very Good to Very Bad) with the option to elaborate on their choice.

Note that the quantitative scaled questions are not intended to provide an overall score of an instructor's teaching effectiveness.

See Appendix C for the SLES refinement decisions and Appendix D for the refined SLES.

Evidence Mapping of the SLES Questions
See Appendix E for an overview of how the refined SLES questions map onto McMaster priorities and the research literature. This appendix provides evidence to support McMaster community identified priorities that shaped the SLES.

Recommendations and Next Steps

The purpose of the SLES
The purpose of the work described in this report has been to address concerns brought forward in the 2019 MUFA report and improve the tools we use to understand and support the student learning experience as well as the professional development of McMaster University instructors' ways of knowing and doing with teaching and learning.

Recommendations
Student Response Rates
- There needs to be collaboration between student unions, MUFA, students, instructors, chairs/deans, the Office of the Vice Provost, Teaching and Learning, the MacPherson Institute, and the Office of Institutional Research and Analysis to implement supports and a knowledge mobilization campaign
- Administering academic unit (IRA) provides to each instructor – materials to share with students when speaking with them about completing the SLES (QR code to access survey + a slide about the key information about the survey and the administering system i.e., Blue)
- Instructors speak with students at multiple points ahead of the survey opening date about the importance of their constructive feedback about their learning experience in the course
    o Actively engage with students about how to provide constructive feedback
    o Let students know how the data will be used
    o Prepare to speak with students after receiving the report about key findings and action points and how to move forward together to improve the learning experience in the course

Administration
- Ideally, the SLES would be administered at two time points during a course to make it possible for instructors to demonstrate their active PD in a course – responding to and working with students in vivo to improve their learning experience and further develop the instructor's teaching effectiveness

- o That being said, even one administration of a SET instrument for a course can be taxing for students and instructors, never mind two
- o In this case, I offer two possibilities:
  - ▪ 1. Administer the survey one time – at the mid-point of the course to provide instructors and students with the opportunity to engage in constructive dialogue about how to best support a positive learning experience for all in the course
  - ▪ 2. Administer the survey at the mid and end points of the course
    - • But change the schedule to a rotational basis (i.e., allow the instructor, in conversation with their Chair/Dean, to select which course(s) in which term in which year the SLES is administered in order to best serve their PD goals, as well as their TP&P and CPM needs
      - o This was also recommended in the 2019 MUFA report

Reporting
- • Provide instructors (and Chairs/Deans) with two reports for each administration of the SLES
  - o 1. Filtering student responses by page 1 question 1 where students indicate they are taking the course because it is "Required"
  - o 2. Filtering student responses by page 1 question 1 where students indicate they are taking the course because it is "Not required"
  - o This will provide context for all of the responses that follow

The refined SLES includes quantitative scaled* and structured qualitative short answer questions.
*Note: the quantitative scaled questions do not provide an overall score of an instructor's teaching effectiveness, rather they either provide a sentiment or frequency response and often provide the student with the opportunity to elaborate on their response in an optional qualitative short answer format.

Interpretation and Application
- • Interpret all quantitative scaled results according to percentage of positive or negative sentiment selections or a percentage of frequencies (the two scaled options provide either sentiment or frequency response options)
  - o Scaled responses should not be distilled down to a score or average
    - ▪ Scaled responses should be treated as ordinal variables and should not be treated as cardinal
      - • This means that we cannot take average across different individuals – according to the arbitrator of the Ryerson Decision – the SLES is not designed to assign a score to an instructor based on student responses to the SLES
  - o There will always be some diversity of interpretation regarding the value of each point on the scale by students, instructors, administrators

- Do not provide average, rather provide proportion/percentage according to type of sentiment (positive or negative) or frequency type (frequent or infrequent)
- Separate positive and negative sentiments
  - Score Strongly and Dis/Agree the same just positive or just negative or neutral – give distribution % for each position on the scale NOT a score
    - To sort the comments by positive and negative responses on the scale
- The SLES is designed to support reflection and dialogue – speak to your chair/dean, instructor, students, student union, MUFA as appropriate
- Consider whether it is ethical to apply data from a response rate of less than 60-70% for personnel decisions
  - There will always be selection bias but how the data is interpreted and applied can help towards mitigating this somewhat

Supports
- Draw on the guides and infographics to advertise and educate the McMaster community about the SLES and why it is important to engage with this constructive feedback tool for dialogue and development
  - Developed by student partner Nikita Kalwani (in partnership on another project with myself, Kim Dej, and Lori Goff
  - accompanying campaign to inform students and instructors of the change and what it meant for how to respond to the SET survey going forward.
- Develop any further supports necessary to help the McMaster community understand the purpose of the SLES, how to engage with the tool, how to interpret and apply the data from the survey for the benefit of instructor and student development of teaching, learning, and relationship building
- Make all materials available in one place, ideally in the evals.mcmaster website
- Offer all support materials in multiple modalities (video, voice, written)
- Make use of McMaster social media accounts, MacPherson and other institutional newsletters, and websites to let students, instructors, and Chairs/Deans know about changes the SLES (changes to the current ways of doing and knowing in collecting and addressing student feedback about their learning experiences in a given course)
- Midterm – recommendation that they engage with MI if they need support on how to engage with their students with the SLES data at midterm

Next Steps – SLES testing and further refinement cycles
- Work with MUFA and the Joint Committee
  - Exploring the next stages of larger considerations relating to administration, data management and ownership, and related policies (policies and procedures recommendations and changes to support new tool and its PD focus/role)

- Administer the SLES widely (if not across the entire institution, then across as many Faculties and departments as possible)
  - This will provide the best possible representation of experiences engaging with the tool and the data it provides
  - Collect feedback from students, instructors, and Chairs/Deans about the SLES and the data it provides
  - Refine the SLES tool and how its data is reported
    - Review the data from the SLES tool to start testing for reliability and validity
    - Review feedback from McMaster community members about the SLES tool and the data it provides
    - Consider alternate modalities of delivery of the SLES to accommodate a diversity of needs
    - Consult with historically marginalized groups at McMaster about ways in which the SLES may exclude or silence them
- Work with members of the Valuing and Evaluating Teaching Hub to align the SLES with any institutionally determined term for teaching effectiveness and its definition
  - Taylor et al. (2022) conducted a study asking students, staff, instructors and faculty members, as well as senior administrators about how they define and evaluate teaching excellence at McMaster. The authors found that there is no institutional or consistent term or definition of what it means to teach well at McMaster University. Without an institutional term and definition of that term, it is challenging to determine what we are trying to measure and how best to do so.
- Non-responses and patterns
  - Who is answering the survey and who is not?
    - Look at demographic information, if possible, to identify any groups that may be excluded/silenced or not answering the SLES for other reasons
      - Is non-response/engagement with SET related to a student's grade, program, level, gender or other identifying characteristic?
      - How do we improve the SLES and/or the SET system at McMaster to increase engagement and representation for all?
  - Non-responses are not at random, meaning a strong selection bias
    - Selection biases exist with any kind of response rate but they have greater impact when non-responses represent a larger proportion of the population (or selected sample)
- Reliability and validity testing of the SLES
- Machine Learning & SET (ML&SET) project + the work within the Office of the IRA
  - Collaborate and align to develop something to complement Blue *text analytics* and build an interface that would allow that analysis to be reported/shared as appropriate for determined purposes (i.e., PD, EoT, etc)
  - Look into Explorance Blue's emerging Machine Learning package – much of what they have recently described doing with this work is very similar to the work our colleagues in the Faculty of Science and the Office of the IRA are striving for

Data Stewardship, Ownership, and Access
- Review and revise policies around data ownership, stewardship, governance, and access
  - Who owns the data?
    - Ideally, raw data and reports should belong to the instructor and a summary of student sentiment and frequency responses should be shared with an instructor/s chair or dean
  - Who holds/stores the data?
    - The Office of Institutional Research and Analysis
  - Who has and can have access to the data?
    - To be determined by policy who owns data, who governs it, and who can have access and by what channels for any research purposes

- **Knowledge Mobilization (KM) campaign** to increase awareness, understanding, participation rates, constructive feedback
  - Create a video with script for multiple modes of access giving an overview of the purpose, implementation, and changes from old survey to new
    - Make all resources available in the same space
      - Consider making all resources available on evals.mcmaster website and maybe also in Avenue
  - Refer to infographics and guides that student partner Nikita Kalwani put together

- **Collaborate** with:
  - Faculty of Science Machine Learning & SET group and the Office of the IRA on the qualitative/text analytics
    - Validity and ease of ability to analyze qualitative comments
  - McMaster Students Union
    - Continue to engage the student voice – make them feel heard and increase investment

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Appendix A – Acronyms and Definitions

Admin 1 – Administration 1 of a pilot test – at the midpoint of the academic term

Admin 2 – Administration 2 of a pilot test – at the endpoint of the academic term

AC – Advisory committee

Blue – Blue by Explorance (the SET survey administration platform now in use at McMaster)

CPM – Career Progress and Merit

EDI – Equity, Diversity, and Inclusion

EDIAD – Equity, Diversity, Inclusion, Accessibility, and Decolonization

EIO – Equity and Inclusion Office

EoT – Evaluation of teaching

GPA – Grade-point average

IRA – Office of Institutional Research and Analysis

IT – Information technology

KM – Knowledge mobilization (or knowledge sharing / creating awareness)

ML & SET – Machine Learning and SET group in the Faculty of Science working to develop a way for instructors to more easily analyze and address qualitative comments from SET

MacPherson; MacPherson Institute – the Paul R. MacPherson Institute for Leadership, Innovation and Excellence in Teaching (McMaster's teaching and learning centre)

MUFA – McMaster University Faculty Association

Pilot 1 – Pilot test #1 of the large set of questions toward developing the SLES

Pilot 2 – Pilot test #2 of the SLES

PD – Professional development (of an instructor's teaching)

Q1 – Question 1 (the policy mandated question to evaluate an instructor's teaching for high-stakes personnel decisions)

SET – Student Evaluations of Teaching

SLE – Student learning experience

SLES – the Student Learning Experience Survey (the SET survey developed and described in this report)

T&L – Teaching and learning

TMU – Toronto Metropolitan University (formerly Ryerson University)

TP&P – Tenure, Permanence, and Promotion

UTS – McMaster's University Technology Services

VPTL – Vice Provost, Teaching and Learning

Appendix B – Project Timeline and Methods of Survey Development

Phase 1 – Environmental Scan, Project Design, and Preparing to Test Survey Questions

Phase 1: Winter 2021 – Literature Reviewing
- Literature reviewing to build on work of:
  - 2019 MUFA report (Local/McMaster level)
  - 2021 McMaster Partnered in Teaching and Learning Strategy's four priority areas (Local/McMaster level)
  - 2008 Gravestock & Gregor-Greenleaf report for HEQCO (National level/CDN perspective)
  - 2018 Ryerson Decision – arbitrator's report
- National scan of Canadian SET landscape – Hearing from SET stakeholders
  - Students, instructors, administrators, teaching and learning centre Educational Developers, SET professionals
    - Looking at areas of strength and need – struggles and tensions:
      - SET policies and practices
      - Interest, efforts, progressions toward change (if any)
- Multiple development cycles for each pilot test
  - In consultation with various stakeholders and experts within and beyond McMaster

*I adapted the McGill resource (see https://www.mcgill.ca/mercury/students/feedback) on how to give constructive feedback to accompany Pilot survey administrations for students – it has since been adapted and put up on the evals.mcmaster.ca webpage.

Phase 1: Summer 2021 – Foundation of Evidence + Community Narratives (local and national)
- Established a foundation of evidence and collected narratives from stakeholders/community members about lived experiences and tensions in course evaluations at McMaster and across the Canadian university landscape – with a focus on the following:
  1. Course Evaluations
  2. Evaluation of Teaching (EoT)
  3. Equity, Diversity, Inclusion, Accessibility, & Decolonization (EDIAD)
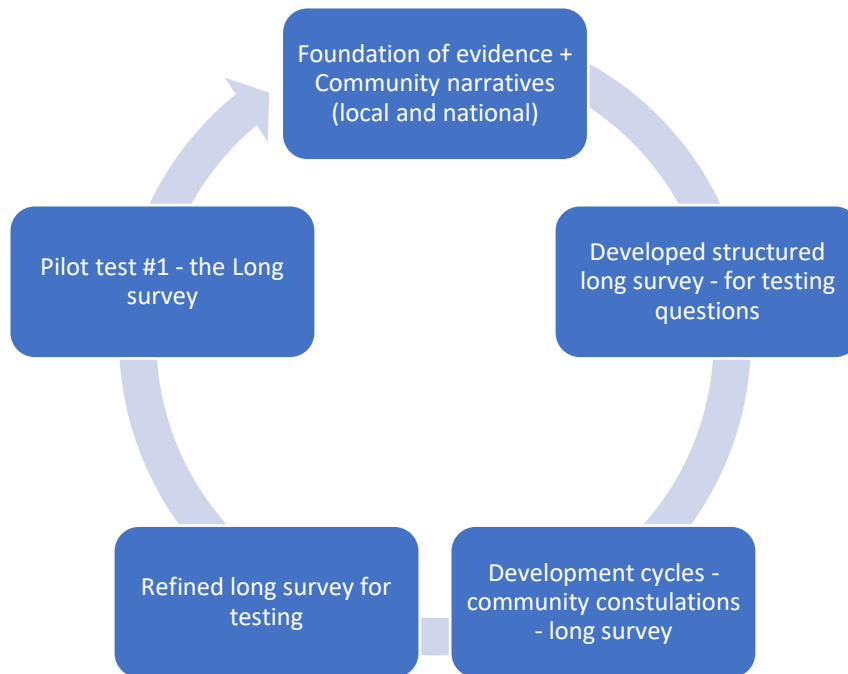 4. Effective teaching
  5. Rate My Professor

Figure B1
Overview of Process Leading to Development of the Long Survey for Pilot 1

Phase 2 – Survey Development, Pilot Testing, and Feedback Cycles

Phase 2: Pilot Test #1 – The Long Survey (Testing Questions)

Phase 2: Fall 2021 – Pilot 1 Long Survey Development Cycles & Community Consultations
- Developed a course evaluation survey that would address the goals of:
  1. Scaffolding student reflection on taking ownership of/actively engaging in their learning
  2. Supporting the professional development of instructors

The main sources drawn upon to develop the long measure (Pilot 1) – listed in order of relevance / impact on this work:

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9. Northeastern University. (n.d.). *Assessment: Early/Midterm course feedback – Obtain feedback to help students*. Centre for Advancing Teaching and Learning Through Research. https://learning.northeastern.edu/midterm-course-feedback/

- The survey went through several development cycles that included soliciting feedback from experts in:
    1. Measurement
    2. Teaching and learning
    3. EDIAD
    4. Online survey design – Qualtrics
        - Collaborated with McMaster's Office of Institutional Research & Analysis (IRA) to translate the survey to Qualtrics
    5. As well as continuing conversations around holistic evaluation, data ownership and management, supports for all stakeholders, validity in implementation, interpretation, and application with McMaster community stakeholders

Phase 2: Winter 2022 – Pilot 1 Long Survey Participants

With the help of McMaster's University Technology Services (UTS), the academic unit responsible for course evaluations up to and including that point in time, we (UTS, my Advisory Committee, and I) identified instructors with the highest SET response rates and asked them, with the Vice Provost, Teaching and Learning's (VPTL) support if they would be interested in participating.

Data sources
1. Pilot 1 – Student responses (response rates, trends, survey feedback)
2. Pilot 1 – Instructor feedback
3. Separate student feedback group
   - In-depth examination of questions, structure, what's missing/not needed
4. My student partners
5. IRA team – Qualtrics
6. Ongoing input from McMaster and broader community via consultations / conversations / research

Phase 2: Winter 2022 – Pilot 1 Survey Administration Platform (Qualtrics)

At this time, the university continued to make use of the in-house course evaluations system built by the UTS academic unit. For the purposes of this pilot test, it was decided to make use of a survey tool the university has licenses with, i.e., Qualtrics. There were significant lessons learned by using this platform. The conditions of the licenses the university has with Qualtrics did not allow for automation of any survey administration processes, everything had to be done manually. This contributed to a significant delay in getting survey data to instructors in a timely manner.

Table B1

Winter 2022 Pilot Test #1 (The Long Survey – Testing Questions)

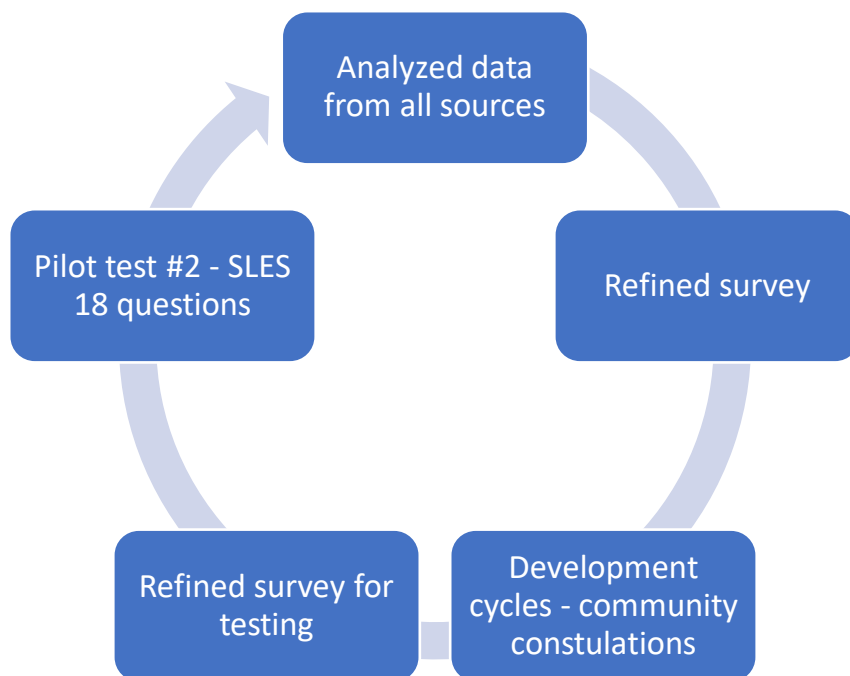|	Length	Administrations	Platform	Participants	Data Sources	Goals
Pilot Test #1 – Winter 2022	The long measure – testing questions	1. Mid-term (formative) 2. End-of-Term (summative)	Qualtrics	6 courses – 1 each in: • Humanities • Social Sciences • Engineering • Health Sciences • Health Sciences BHSc • Arts & Science *Participants - instructors with higher SET response rates + their students	1. Pilot – Student responses (response rates, trends, survey feedback) 2. Pilot – Instructor feedback 3. Separate student feedback group • In-depth examination of questions, structure, what's missing/not needed 4. My student partners 5. IRA team – Qualtrics 6. Ongoing input from McMaster and broader community via consultations / conversations / research	Design questions that are evidence-based and identify what matters to students & instructors • Which questions to prioritize for SLE & PD • Response rates and trends • Usefulness of data reported and how • Administration / implementation concerns • 2019 MUFA report recommendations

Figure B2
Overview of Process of Analyzing Pilot 1 Data and Survey Refinement

Phase 2: Spring/Summer 2022 – Pilot 1 Analysis & Survey Refinement

- Analyzed, interpreted, and applied Winter 2022 Pilot 1 data
  - Refined, revised survey to arrive at SLES
    - Development & feedback cycles
- Kim Dej and Brandon Wooldridge (Educational Developer with MacPherson) delivered update to MUFA on my behalf (I prepared a summary for them to share) – April, 2022

Phase 2: Spring/Summer 2022 – Pilot 1 Response Rates

Table B2
Pilot 1 – Winter 2022 Student Response Rates

Faculty	Course	Invited ADMINs1&2	Completed ADMIN1	Completed ADMIN2	Response Rate ADMIN1	Response Rate ADMIN2
Arts & Science	Statistics*	75	36	N/A*	48%	N/A*
Engineering	Mechanical Engineering	108	34	75	31.48%	69.44%
Health Sciences	Immunology	34	17	9	50%	26%
Health Sciences	Scientific Writing	60	11	11	18.33%	18.33%
Humanities	History	42	16	5	38.10%	11.90%
Social Sciences	Community Engagement	21	5	18	23.81%	85.71%
	OVERALL	**340**	**119**		**35.00%**	**34.71%**

*Note: This course was withdrawn from participation for the end-of-term administration of the survey (ADMIN2).

Phase 2: Pilot Test #2 – The Student Learning Experiences Survey (SLES)

Phase 2: Fall 2022 – Pilot 2 SLES Development Cycles & Community Consultations
- SLES survey developed – 18 questions, including Q1 policy mandated question
- Still addressed the goals of:
    - Scaffolding student reflection on taking ownership of/actively engaging in their learning
    - Supporting the professional development of instructors

- The Pilot 2 SLES survey went through several development cycles that included soliciting feedback from experts in:
    1. Measurement
    2. Teaching and learning
    3. EDIAD
    4. Online survey design – Explorance Blue
        - Collaborated with McMaster's Office of Institutional Research & Analysis (IRA) to translate the survey to Blue
    5. As well as continuing conversations around holistic evaluation, data ownership and management, supports for all stakeholders, validity in implementation, interpretation, and application with McMaster community stakeholders

Phase 2: Winter 2023 – Pilot 2 SLES Participants
With the help of McMaster's University Technology Services (UTS), the academic unit responsible for course evaluations up to and including that point in time, we (UTS, my Advisory Committee, and I) identified instructors with the highest SET response rates and asked them, with the Vice Provost, Teaching and Learning's (VPTL) support if they would be interested in participating.

Drawing on the processes employed to identify and solicit participants for Pilot 1, I first asked the six instructors that participated in Pilot 1 if they would be interested in continuing on to Pilot 2; four said yes, but one withdrew when they realized they would be on sabbatical. With the help of the AC for this work, we identified 3 more instructors/courses to solicit – the VPTL and AC member for this work volunteered to serve as a Pilot 2 participant – thereby being able to provide a first-hand experience of the refined Pilot 2 SLES to the other members of the AC (beyond what I reported to them of my findings).

Data sources
1. Pilot 2 – Student responses (response rates, trends, survey feedback)
2. Pilot 2 – Instructor feedback
3. My student partners

4. IRA team – Blue
5. Ongoing input from McMaster and broader community via consultations / conversations / research

Phase 2: Winter 2023 – Pilot 2 Survey Administration Platform (Blue)

The university convened an advisory group to address the growing needs for a vendor-built platform to administer all aspects of course evaluations that provided greater automation and less manual or human labour to administer the process of collecting, analyzing, reporting, and distributing course evaluations data. Between pilot tests for this survey, the advisory group posted an RFP and eventually selected Blue by Explorance as the vendor. A contract was signed and the system had been set up and tested in time to run Pilot test #2 of the survey using Blue. The automation allowed for instructors to access their SET data in a timely fashion.

Table B3

Winter 2023 Pilot Test #2 (SLES)

	Length	Administrations	Platform	Participants	Data Sources	Goals
Pilot Test #2 – Winter 2023	SLES – 18 questions (including policy mandated Q1)	1. Mid-term (formative) 2. End-of-Term (summative)	Blue	6 courses / 7 instructors: • Engineering (1) • Health Sciences (1) • Humanities (1) • Social Sciences (3) *Participants - instructors + their students 4/6 Pilot 1 participants expressed interest in participating in Pilot 2	1. Pilot – Student responses 2. Pilot – Instructor feedback 3. My student partners 4. IRA team – Blue 5. Ongoing input from McMaster and broader community via consultations / conversations / research	Design questions that are evidence-based and identify what matters to students & instructors • Which questions to prioritize for SLE & PD • Response rates and trends • Usefulness of data reported and how • Administration / implementation concerns • 2019 MUFA report recommendations

Phase 2: Spring/Summer 2023 – Pilot 2 Analysis & Survey Refinement

- Analyze, interpret, and apply Winter 2023 Pilot 2 data
  - Refine, revise survey further (questions, wording, response options, reporting, Blue, etc.)
    - Development & feedback cycles
      - Refined SLES
        - Ultimately resulting in a version of the survey that is ready for the next stages of larger considerations relating to administration, data management and ownership, and related policies
- Reporting on processes and findings
  - Drafting recommendations and next steps

Phase 2: Spring/Summer 2023 – Pilot 2 Response Rates

Table B4

Pilot 2 – Winter 2023 Student Response Rates*

Faculty	Course	Invited		Completed		Response Rate	
		ADMIN1	ADMIN2	ADMIN1	ADMIN2	ADMIN1	ADMIN2
Engineering	Mechanical Engineering	103	99	24	81	23%	82%
Health Sciences	Scientific Writing	65	65	6	3	9%	5%
Humanities	Latin American Studies	33	33	12	14	36%	42%
Social Sciences	Community Engagement	29	28	3	13	10%	46%
	Community Engagement	50	50	18	4	36%	8%
	Gender Studies	188	187	9	9	5%	5%
	OVERALL	**474**	**462**	**72**	**124**	**15%**	**26.84%**

*Note: Anecdotally, many administrators, staff, instructors/faculty, and students noted that this term many seemed less engaged – potentially due to increasingly resuming in-person teaching and learning activities (as we emerge from COVID-19) – as compared to Winter 2022 – and that this was impacting engagement in teaching and learning activities.

Phase 2: Pilot 2 – About the SLES Structure

The Pilot 2 SLES included quantitative scaled and structured qualitative short answer questions that address the seven purposes outlined on page 13 of this report (see the section entitled: SET Survey Development Purpose), with an emphasis on:

4. Making sure the survey supports instructors' engagement in formative professional development (PD)
   a. Provides a means for instructors to gather constructive feedback about the learning experiences of students within their courses

5. Helping students reflect on their own active engagement in their learning and provide constructive feedback
6. Supports the development of constructive and iterative relationships between students and instructors

The Pilot 2 SLES had 18 questions, organized by major themes:
- Page 1 – Context & Student Reflection on Engaging in their Learning
- Page 2 – Course Material, Assessments, & Supports
- Page 3 – Skills Developed & Overall Course Experience

Student and instructor feedback from Pilot 2 about specific aspects of the SLES experience are summarized immediately below.

Phase 2: Pilot 2 Instructor and Student Feedback Summary

Overall: Pilot 2 student and instructor feedback provided valuable insights into the strengths and improvement areas of the SLES. Students and instructors felt that the SLES fosters student reflection of their learning experience while prompting constructive feedback for course improvement and instructor professional development. All instructors indicated they are very likely to use the SLES over the usual SET/course evaluations.

Questions: The diversity of questions focusing on the different course components was appreciated and further targeted questions were suggested to help the SLES adapt to a diversity of course contexts. Improvements to the current questions were also proposed, focusing on question wording, clarity, purpose, utility, and applicability to varying course settings. A few questions were proposed to be eliminated, as they did not seem to provide valuable feedback for the instructor and/or felt unclear, irrelevant or redundant for students. The option to provide both qualitative and quantitative feedback through the combination of scaled and short-answer questions was valued, while some students felt that the number of short answer questions could be reduced to prevent survey fatigue.

Survey Length: There were mixed opinions regarding survey length, with some students and instructors finding it long and others finding it short/balanced. Pilot 2 student self-reported survey completion time data indicated that the survey took approximately 5-20 minutes for most students. Overall, there were recommendations to reduce survey length.

Response Rates: Despite enthusiasm about the SLES being more beneficial for students and instructors, the survey response rates remain low. Instructors noted various strategies they have used to improve response rates (e.g., allocating more class time, announcements/reminders, etc.) but optimizing response rates continues to be a challenge.

Phase 2: Pilot 2 – Refining the SLES Based on Instructor and Student Feedback

The above noted student and instructor recommendations were considered and implemented into the SLES question refinement and decision-making process for campus-wide administration, resulting in the refined survey with the following changes:

Questions:
- Modification of questions to enhance wording, clarity, purpose, and applicability to varying course settings
- Removal of questions that did not provide value for students/instructors (e.g., those that were redundant, ambiguous/unclear, unnecessary, etc.)
- Adding a "Not Applicable" option to the scale for certain questions where it is relevant

Questions / SLES Structure:
Based on feedback, the goal was to ensure a balance of scaled and short answer questions aiming to reduce fatigue in completing the SLES. To that end, the following was considered/implemented (where applicable):

- Reduce repetitive/redundant questions
- Balance multiple choice/scaled and short answer questions
  - Consider adding a scaled response option for each question (including the short answer questions), while keeping the short-answers piece optional
    - This may also help with data analysis for the instructor
  - Reduction of some short answer questions
  - Conversion of some short answer questions into multi-select response or scaled questions
- Re-organize the remaining short answer questions as optional follow-up questions to the relevant scaled/multi-select response questions
  - Thus, the current SLES has all multi-select response or scaled questions, with optional follow-up short answer questions to seek further student input/qualitative data where necessary. The benefits of this structure are two-fold:
    - Easier user experience and reduced survey fatigue
    - Easier qualitative data analysis process as all the short answers data can be organized by the scaled/multi-select response question options, allowing for sentiment-based or category-based exploration of the qualitative data
- Consider use of sentiment versus frequency scales
- Consider distribution of questions across survey pages in Blue (visual presentation) and page headings by theme

Survey Length:

- Reduced survey length by removal of unnecessary/redundant/ambiguous questions, as well as questions that do not bring value to the student or instructor

Table B5
Summary of Changes to SLES Structure/Questions from Pilot 2 SLES to Refined SLES

Survey	Total Questions	Short Answer Questions	Other Notes
Pilot 2: SLES	18 (+ 5 text box prompts – so 23 total, technically)	7 out of 18 total • (4 of the short answers had a few extra text box prompts, totaling 5 extra text boxes in addition to the 7 text boxes)	
After Pilot 2: SLES refined	15 (+5 follow-up Qs – so 20 total)	4 out of 15 total • (No extra text box prompts – each short answer only has one text box) • Pilot 2 original text box prompts were converted to follow-up Q.)	Reduction by 3 total questions (short answer question type), compared to Pilot 2

Some Additional Technical Considerations for Viewing in Blue
- Make page count more visible on pages
  - Add page theme for each page of the SLES to the page count
- Look into making completion rate visible to students
- Pass on technical issues feedback to Blue
- Make mandatory questions with "other" section show non-mandatory comment question underneath
- Change senate mandated question to 1-5 scale with labels (no numbers – not meant to serve as a rating)
- Consider whether the text box underneath the Q1 policy mandated question should be mandatory
- Use N/A option for questions with not applicable
  - Try to make it stand out if we can
  - Test reporting to make sure this gives useful responses
- Strongly/Agree = positive, Strongly/Disagree = negative
- Add extra information for long multi-select options as a "footnote" using the details block
- Remove the post-survey survey

*See Recommendations section of the report for next steps.

Appendix C – Decisions Tracking: Finalizing the SLES Based on Pilot 2 Participant and Contributor Feedback

Appendix C details the SLES refinement thought processes and decisions employed to prepare a refined version of the SLES for McMaster-wide Implementation.

Table C1 highlights the survey considerations/decisions after reviewing student and instructor Pilot 2 feedback, as well as feedback/input from other stakeholders/contributors, and implements the proposed considerations.

Table C1 LEGEND:
- Modification considerations - July 28 mtg + mtgs in Aug (Amanda Kelly Ferguson & Manahil Iftikhar)
- Modification decisions – Aug 21, 2023
- Modification considerations (by Manahil, when finalizing this document and creating the final question list) - Aug 26, 2023
- Final decision – Aug 29, 2023

SLES NOTES
- * before a question = optional
    - If there is no *, the question is mandatory
- Please make it so that student scan start, stop and save, and return to the survey
- Please include a progress bar and/or pages completed
- Page 3, Q2 = the policy mandated question for faculty (usually referred to as Q1)
- The text preceding the survey questions will be updated to reflect the changes to the survey structure, etc.

Table C1
SLES Refinement – Feedback Implementation and Decisions Tracking

SLES Online survey page 1 THEME DECISION: Student Context & Engagement
1) I am taking this course because it is: • Required • Not required   • *if this is selected, there will be a pop-up text box Notes for IRA: • During reporting, could we aggregate results by the response option selected? Almost like creating two reports based on the selected response(s). DECISION: KEEP AS IS.

2) I have been spending __ hours per week on this course outside of class time:
- 0
- 1-2
- 3-4
- 5-6
- 7+
- "Other, please specify [text box]" option?

DECISION: KEEP AS IS but REMOVE 'Other' because it may be too overwhelming for user/data analysis as well.

3) I have been coming to class prepared, having completed any pre-class work (e.g., readings, assignments, etc.).
- Always | Mostly | Sometimes | Rarely | Never | Not Applicable

DECISION: BOOKMARK: Come back to the question of using sentiment VS frequency scale
* consider 'Not Applicable' bc not all courses have pre-class work?

DECISION: KEEP AS IS and WITH frequency scale as it is more relevant to the question. ADD "Not Applicable" as a response option to the scale.

The questions 3-4 are action-focused, so it makes sense to pair with frequency scale.

4) I have been actively participating in course activities (e.g., in person/online class discussions, tutorials, labs, etc.).
- Always | Mostly | Sometimes | Rarely | Never
*4a) I feel that my class participation can be increased and/or improved by:
- [Text box]

DECISION: BOOKMARK: Come back to the question of using sentiment VS frequency scale
- Do not include 'Not Applicable' as it seems irrelevant here.

DECISION: KEEP AS IS and WITH frequency scale as it is more relevant to the question. Do not include 'Not Applicable' in the response options as class participation is present in all courses.

The questions 3-4 are action-focused, so it makes sense to pair with frequency scale.

5) I have been feeling comfortable discussing ideas/viewpoints in this course.
- Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree
- Include optional text box to elaborate [Taking a new look at this question in light of the final question list, I feel that it may be too many text boxes if we added one here.
  i. If we do add a text box, should we consider only making it appear if someone selects disagree-strongly disagree? Not sure if making it appear for all students is necessary.]

DECISION: KEEP AS IS. REMOVE optional text box as it is not necessary (students can provide feedback in 4a). Do not include 'Not Applicable' in the response options as class discussion is present in all courses.

The questions 5-6 are feeling-focused, so it makes sense to pair with sentiment scale.

6) I feel that this course has been providing me with an opportunity to learn from other students.
- Always | Mostly | Sometimes | Rarely | Never

DECISION: BOOKMARK: Come back to the question of using sentiment VS frequency scale

DECISION: KEEP AS IS. MODIFY SCALE to sentiment scale.
- Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree

The questions 5-6 are feeling-focused, so it makes sense to pair with sentiment scale. Do not include 'Not Applicable' in the response options as learning from all students is present in all courses.

SLES Online survey Page 2
THEME DECISION: Learning & Course Context

1) I feel that I understand the material being presented in the course.
- Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree

DECISION: KEEP AS IS. Do not include 'Not Applicable' in the response options as it seems irrelevant.

2) I feel that I understand how my performance/demonstration of learning is being evaluated.
- Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree

DECISION: KEEP AS IS. Do not include 'Not Applicable' in the response options as it seems irrelevant – in every course there is an evaluation component.

3) I feel that the feedback I have been receiving in the course is helpful.
- Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree | Not Applicable

DECISION: to make things simple for IRA/Blue team, add "Not Applicable" to the response options.
- OR consider a separate box for Not Applicable – WHILE CONSIDERING all other questions.

DECISION: KEEP AS IS. ADD "Not Applicable" here, as not all students may have received feedback by mid-point of the course. A separate text box may not be necessary to limit amount of text boxes across the survey.

4) I have found the following course component(s) most **helpful** for my learning:
Please select all that apply.
- ❑ Readings
- ❑ Assignments
- ❑ Tests
- ❑ Labs
- ❑ Tutorials
- ❑ Other, please specify [text box]
*4a) I have found this/these course component(s) most **helpful** because: [Text box]

5) I have found the following course component(s) most **difficult** for my learning:
Please select all that apply.
- ❑ Readings
- ❑ Assignments
- ❑ Tests
- ❑ Labs
- ❑ Tutorials
- ❑ Other, please specify [text box]

*5a) I have found this/these course component(s) most **difficult** because: [Text box]

6) I have been able to access the instructor for individual help outside of class hours.
- Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree

6a) I have been using the following method(s) to access the instructor outside of class hours:
Please select all that apply.
- ❑ Email
- ❑ Office hours
- ❑ Other, please specify [text box]

7) I have been able to get individual help that is flexible and supportive of my learning needs.
- Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree

7a) I have been seeking help from the following source(s):
Please select all that apply.
- ❑ Instructor
- ❑ Peers
- ❑ McMaster Student Services
- ❑ McMaster Library
- ❑ Other, please specify [text box]

*7b) I have found this/these sources helpful because: [Text box]

We forgot to discuss this last time... consider utility for instructor
- *Please explain what was helpful: (DISCUSS – do we need this?)
  - ○ [Text box]

SLES Online survey page 3

THEME DECISION: Key Takeaways: Skill Development & Overall Experience

1) I feel that this course has been helpful in developing or strengthening ~~some or all of~~ the following skill(s). Consider proposed edit in orange (to match with the course components question (Q4&5), and because the prompt below states 'please select the skills that apply')
Please select the skill(s) that apply.
- ❑ Written communication
- ❑ Oral communication
- ❑ Presentation
- ❑ Listening
- ❑ Critical thinking[1]
- ❑ Critical reading[2]
- ❑ Research (Qualitative, Quantitative, &/or Mixed Methods)
- ❑ Laboratory
- ❑ Statistical, math, or numeracy
- ❑ Computer & software
- ❑ Coding
- ❑ Self-directed learning
- ❑ Time management
- ❑ Project management
- ❑ Leadership
- ❑ Collaboration
- ❑ Interdisciplinary thinking[3]
- ❑ Workplace-ready
- ❑ Other, please specify [text box]

[1]**Critical thinking skills** (i.e., systematically identify and evaluate through interpretation, analysis, and inference, as well as explain judgment via application of evidential, methodological, or contextual considerations)
[2]**Critical reading skills** (i.e., systematically process text and examine for: context, your own beliefs and values in relation to the text, patterns, logic of argument, language use, author identity and credibility)
[3]**Interdisciplinary thinking skills** (i.e., integration of aspects of more than one academic discipline to explore diverse knowledges and ways of doing)

DECISION: KEEP AS IS, WITH the ORANGE MODIFICATIONS. ASK IRA – how to make the [text box] for Other as OPTIONAL?

2) Overall for this course, how would you describe your learning experience?
- **[text box]**
[mandatory]
CONSIDERATIONS:
(1) Keep as mandatory but change wording to adapt to a strongly agree-disagree scale, with an optional text box.
- Check with IRA if we can filter ALL survey results by students that select a specific response on this scale for this question.
- Check with IRA about how the scaled version of this question has been worded in the past.

    o Even though the policy shows it as it is now, in the past it has been administered as a scaled version

(2) If removed from TPP policy, would we still keep it?

DECISIONS: For now, KEEP AS IS, as the last question – good summary of survey/learning experience.
(1) Re: possibility of making it a scaled question
  • Might not implement this because initially the policy removed the scaled response due to interpretation issues
(2) Other possibilities of modifying this mandated policy question:
[1] Overall, I feel that my learning experience in this course has been positive.
    o Strongly agree-disagree + optional text box to elaborate
OR:
[2] (Q2 Page 3 of Pilot 2 original survey):
*I would like to highlight the following aspects of my learning experience in this course:
    o [text box, with prompts:
       ▪ What helped me learn best
       ▪ What could be improved for my learning]

Appendix D – The Refined SLES

SLES NOTES:
- * before a question = optional
  - If there is no *, the question is mandatory
- Student scan start, stop and save, and return to the survey
- Progress bar visible at the top of each survey page
  - Name of section and Page xofy indicated to help student know how much more of the survey remains to be completed
- Page 3, Q2 = the policy mandated question for faculty (usually referred to as Q1)

SLES Online survey page 1 | *Student Context & Engagement*
1) I am taking this course because it is: - Required   - Not required   *if this is selected, there will be a pop-up text box
2) I have been spending __ hours per week on this course outside of class time: 0   1-2   3-4   5-6   7+
3) I have been coming to class prepared, having completed any pre-class work (e.g., readings, assignments, etc.).   Always | Mostly | Sometimes | Rarely | Never | Not Applicable
4) I have been actively participating in course activities (e.g., in person/online class discussions, tutorials, labs, etc.).   - Always | Mostly | Sometimes | Rarely | Never   *4a) I feel that my class participation can be increased and/or improved by: [Text box]
5) I have been feeling comfortable discussing ideas/viewpoints in this course.   Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree
6) I feel that this course has been providing me with an opportunity to learn from other students.   Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree

SLES Online survey Page 2 | *Learning & Course Context*

1) I feel that I understand the material being presented in the course.
- Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree

2) I feel that I understand how my performance/demonstration of learning is being evaluated.
- Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree

3) I feel that the feedback I have been receiving in the course is helpful.
- Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree | Not Applicable

4) I have found the following course component(s) most **helpful** for my learning:
Please select all that apply.
- ❑ Readings
- ❑ Assignments
- ❑ Tests
- ❑ Labs
- ❑ Tutorials
- ❑ Other, please specify [text box]

*4a) I have found this/these course component(s) most **helpful** because: [Text box]

5) I have found the following course component(s) most **difficult** for my learning:
Please select all that apply.
- ❑ Readings
- ❑ Assignments
- ❑ Tests
- ❑ Labs
- ❑ Tutorials
- ❑ Other, please specify [text box]

*5a) I have found this/these course component(s) most **difficult** because: [Text box]

6) I have been able to access the instructor for individual help outside of class hours.
- Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree

6a) I have been using the following method(s) to access the instructor outside of class hours:
Please select all that apply.
- ❑ Email
- ❑ Office hours
- ❑ Other, please specify [text box]

7) I have been able to get individual help that is flexible and supportive of my learning needs.

- Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree

7a) I have been seeking help from the following source(s):
Please select all that apply.
- ❑ Instructor
- ❑ Peers
- ❑ McMaster Student Services
- ❑ McMaster Library
- ❑ Other, please specify [text box]

SLES Online survey page 3 | *Key Takeaways: Skill Development & Overall Experience*

1) I feel that this course has been helpful in developing or strengthening the following skill(s):
Please select the skill(s) that apply.
- ❑ Written communication
- ❑ Oral communication
- ❑ Presentation
- ❑ Listening
- ❑ Critical thinking[1]
- ❑ Critical reading[2]
- ❑ Research (Qualitative, Quantitative, &/or Mixed Methods)
- ❑ Laboratory
- ❑ Statistical, math, or numeracy
- ❑ Computer & software
- ❑ Coding
- ❑ Self-directed learning
- ❑ Time management
- ❑ Project management
- ❑ Leadership
- ❑ Collaboration
- ❑ Interdisciplinary thinking[3]
- ❑ Workplace-ready
- ❑ Other, please specify [text box]

[1]**Critical thinking skills** (i.e., systematically identify and evaluate through interpretation, analysis, and inference, as well as explain judgment via application of evidential, methodological, or contextual considerations)
[2]**Critical reading skills** (i.e., systematically process text and examine for: context, your own beliefs and values in relation to the text, patterns, logic of argument, language use, author identity and credibility)
[3]**Interdisciplinary thinking skills** (i.e., integration of aspects of more than one academic discipline to explore diverse knowledges and ways of doing)

2) Overall for this course, how would you describe your learning experience?
- Very Good | Good | Neutral | Bad | Very Bad

*2a) I feel that my learning experience has been [insert scaled selection] because: [Text box]

Appendix E - Mapping the SLES questions onto research evidence and McMaster policy/strategy documents

Background & Process

The mapping table presented below demonstrates how the SLES reflects research evidence focused on: effective teaching, evaluation of teaching, course evaluations, student evaluations of teaching, and EDIAD, both in the McMaster, Canadian, and international contexts. Research evidence surrounding the aforementioned focus areas was reviewed and consolidated by mapping to the SLES survey questions and forming research-based themes where applicable. The findings have been organized into Table E1: Executive Summary – Mapping overall SLES and specific questions. Table E1 contains the refined SLES questions and indicates where there is a basis of evidence for the question supported by the research literature and/or McMaster policy, strategy, resource documents.

Understanding Table E1
- **Grey header sections** – briefly summarize the topics of the questions on each of the 3 pages of the SLES
- **Underlined & colour-coded statements** – represent research-based themes that apply to multiple SLES questions and/or the overall SLES
    - The research-based themes were developed by grouping similar research concepts into overarching themes
- **Statements in black font** – represent paraphrased research evidence that directly applies to specific SLES questions, rather than multiple SLES questions and/or the overall SLES
    - This research evidence was distinct from generated research-based themes

Table E1

Executive Summary – Mapping Overall SLES and Specific Questions

SLES	Mapped to Research Literature and McMaster Policy, Strategy, or Resource Documents	
Question & Keyword	*McMaster Context*	*Canadian/International Context*
Overall survey	Fostering active learning (De Bie & Brown, 2017; Grignon et al., 2019; McMaster University Forward with Integrity, 2012; McMaster University: Partnered in T&L, 2021) Focusing on student learning experience rather than evaluating teaching (Grignon et al., 2019; Jackson et al., n.d.)	Focusing on student learning experience rather than evaluating teaching (Australian Institute for Teaching and School Leadership, 2011; Centre for Teaching Support & Innovation, 2018; Gravestock & Gregor-Greenleaf, 2009; Simon Fraser University, 2019; University of Waterloo, 2019; Ramsden, 2003) Learner-centered approach; facilitating learning experience; fostering active learning, engagement, & reflection (Allan et al., 2018; Australian Institute for Teaching and School Leadership, 2011; Chickering & Gamson, 1987; Gebre, 2012; Gebre, 2015; Gravestock & Gregor-Greenleaf, 2008; Ramsden, 2003; The Ontario College of Teachers, 2007; University of Waterloo, n.d.; University of Saskatchewan, 2017)
Page 1 (Themes): Student engagement with their learning & self-reflection; motivation, preparation; participation; & learning from peers.		
Q1: Reason for course (Required/Not Required)	Fostering active learning	Contextualize results by defining student motivation for the course (Gravestock & Gregor-Greenleaf, 2008)
Q2 & Q3: Class preparation (Hours	Fostering active learning	Learner-centered approach; facilitating learning experience; fostering active learning, engagement, & reflection

outside class + Completion of pre-class work)		
Q4: Active class participation **Q4a:** Self-reflection re: increasing/improving class participation	Fostering active learning	Learner-centered approach; facilitating learning experience; fostering active learning, engagement, & reflection
Q5: Comfort discussing ideas/viewpoints	EDIAD (De Bie & Brown, 2017; Jackson et al., n.d.; McMaster University: Office of the President, 2021; McMaster University, 2021: Partnered in T&L; Taylor et al., 2022)	EDIAD (Allan et al., 2018; Australian Institute for Teaching and School Leadership, 2011; Chickering & Gamson, 1987; Columbia Center for Teaching and Learning, 2018; Gebre et al., 2012; Gebre et al., 2015; Guthrie et al., 2020; Ramsden, 2003; The Ontario College of Teachers, 2007; University of Saskatchewan, 2017; University of Waterloo, n.d)
Q6: Opportunity to learn from other students	EDIAD	EDIAD
Page 2 (Themes): Course material; topics; assignments; evaluations; feedback; & support.		
Q1: Understand course material	"Course activities and content delivery" (Taylor et al., 2022, p. 5)	Effective communication and delivery of course material (Gebre, 2012; Gebre et al., 2015; Ramsden, 2003; University of Saskatchewan, 2017; University of Waterloo, n.d.)
Q2: Understand evaluation of performance / demonstration of learning	Clear communication & expectations; effective performance assessments (De Bie & Brown, 2017; MacPherson Institute, n.d.; McMaster University: Tenure and Promotion policy, 2012; Taylor et al., 2022)	Clear communication & expectations; course organization (Ramsden, 2003; University of Saskatchewan, 2017; University of Waterloo, n.d.)

Q3: Feedback received is helpful	Explicit, clear, & timely feedback, marking (De Bie & Brown, 2017; McMaster University: Tenure and Promotion policy, 2012; Taylor et al., 2022)	Constructive, timely, & effective feedback for student improvement (Australian Institute for Teaching and School Leadership, 2011; Chickering & Gamson, 1987; Ramsden, 2003; University of Saskatchewan, 2017; University of Waterloo, n.d.)
Q4: Most **helpful** course component(s) Q4a: Self-reflection re: most **helpful** because	Fostering active learning	Self-assessment/Reflection: Assessments & course topics learning (Chickering & Gamson, 1987; Hooks, 2003; Ramsden, 2003)
Q5: Most **difficult** course component(s) Q5a: Self-reflection re: most **difficult** because	Fostering active learning	Self-assessment/Reflection: Assessments & course topics learning
Q6: Able to access the instructor for individual help outside of class Q6a: Select methods used to access instructor	Able to seek accessible, flexible, and supportive help from the instructor (De Bie & Brown, 2017; McMaster University: Tenure and Promotion policy; Taylor et al., 2022)	Able to seek accessible, flexible, and supportive help from the instructor (Gebre, 2012; Ramsden, 2003; University of Saskatchewan, 2017; University of Waterloo, n.d.)
Q7: Able to get individual help that is flexible & supportive of learning needs **Q7a:** Select sources for help sought	Able to seek accessible, flexible, and supportive help from the instructor	Able to seek accessible, flexible, and supportive help from the instructor

Page 3 (Themes): Skill development; overall learning experience.		
Q1: Skills developed/strengthened in the course	**Various learning styles/skills:** active learning, experiential learning, problem-based learning, student-community connection, partnered & interdisciplinary learning, lifelong learning, skills beyond class, intercultural understanding (McMaster University, 2021: Partnered in T&L; McMaster University: Office of the President, 2021; McMaster University Forward with Integrity, 2012; Taylor et al., 2022; Jackson et al., n.d.)	**Various learning styles/skills:** social & intellectual development, personal & affective development, holistic development, critical/original/creative thinking, problem-solving, intellectual growth, critical analysis (Australian Institute for Teaching and School Leadership, 2011; Gebre, 2012; Ramsden, 2003)
Q2: Overall description of learning experience	Applies to all courses (McMaster University: SPS B1, 2020)	"global rating questions are equally, if not more, valuable for summative assessment of teaching than multidimensional measures" (Gravestock & Gregor-Greenleaf, 2008, p. 31)

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