



Bluenotes **GLOBAL** 2020  
VIRTUAL EXPERIENCE

# What Makes Feedback Usable for Instructors?

Swasti Arora & Leanne Stevens  
Dalhousie University







# Formative Feedback

- What:
  - is going well in class?
  - needs to be changed?
  - are students learning?





# Formative Feedback?

“So far, I have really enjoyed the labs in PSYO 1011. One of my favourite labs was the one where we ate the jellybeans.”







# New & Improved

1. What was the most useful skill you have learned from the lab/assignments?
2. Learning new skills can be challenging. What have you found most challenging so far in the PSYO1011 labs? What helped you in tackling these challenges?
3. Do you find the lab environment a comfortable space for learning and participation? What might you change (if anything) to increase your comfort level for learning and participation?
4. Anything else you feel is important?



# Formative Feedback!

“How to reflect and discuss  
results of an experiment,  
analyze data and  
explore appropriate skills  
like critical thinking and  
problem solving.”



# Our Project

- Can question phrasing influence the quality of student feedback?
- Can students provide feedback about learning outcomes?





# Mixed-Methods Analysis

- **Thematic analysis – Braun & Clarke (2006).**

Theme → Codes ⇒ Keywords

- **Content analysis - Krippendorff (2004).**





# Themes and Codes

Course Structure	Scientific Literacy	Learning Strategies	Learning Resources	Social Supports	Lab Environment	Nothing
Assignments	Paraphrasing	Note-Taking	Online Resources	Prefect	Social Environment	Nothing
Pre-Labs	Citations	Practice	Course Text Resources	Teamwork	Physical Environment	
Hands-On Activities	Data Comprehension & Creation	Time Management			Labs (General)	
Lab Activities	Article Comprehension	Critical Thinking				
Grading	Finding Articles					
	Research Methods					



# Organizational Codes

- **Content analysis – frequency of codes and organizational codes**

## **Code Contexts:**

- Liked
- Disliked
- Useful
- Challenge
- Challenge Resolution
- Suggestion
- Uninformative Suggestion

# QDA Miner

The screenshot displays the QDA Miner software interface. On the left, there are three panels: 'CASES' with a list of Case #1 through Case #9; 'VARIABLES' with 'YEAR 2016', 'QUESTION 1', 'RESPONSE [DOCUMENT]', and 'VAR4'; and 'CODES' with a search bar and a list of codes under 'Scientific Literacy' and 'Research Methods'. The main area is titled 'DOCUMENTS:' and shows a document named 'RESPONSE'. The text in the document is: 'The most useful skill I learned in PSYO 1011 was how to create different graphs on Excel and how to properly express data/optimizing the graph for my data.' A code 'Useful - Data Comprehension and Creation' is applied to the text. The right side of the interface shows a list of codes, with 'Useful - Data Comprehension and Creation' highlighted in purple.

**CASES:**

- Case #1
- Case #2
- Case #3
- Case #4
- Case #5
- Case #6
- Case #7
- Case #8
- Case #9

**VARIABLES**

- YEAR 2016
- QUESTION 1
- RESPONSE [DOCUMENT]
- VAR4

**CODES**

- Scientific Literacy
  - Like - Finding Articles
  - Dislike - Finding Articles
  - Challenge - Finding Articles
  - Challenge Res - Finding Articles
  - Uninformative - Finding Articles
  - Useful - Finding Articles
  - Suggestion - Finding Articles
- Research Methods
  - Like - Research Methods
  - Dislike - Research Methods
  - Challenge - Research Methods
  - Challenge Res - Research Methods
  - Uninformative - Research Methods

**DOCUMENTS:**

**RESPONSE**

CODE: Useful - Data Comprehension and Creation

The most useful skill I learned in PSYO 1011 was how to create different graphs on Excel and how to properly express data/optimizing the graph for my data.

Useful - Data Comprehension and



# Theme: Course Structure

Year	Code	Context					
		Like	Dislike	Useful	Challenge	Challenge Resolution	Suggestion
2015	Assignments		7.56 ←		14.86 ←		8.19 ←
2016				8.71 ←	25.41 ←		
2015	Pre-Labs						2015
2016							2016
2015	Hands On Activities	20.40 ←					
2016							
2015	Lab Activities	63.98 ←	17.51 ←	11.96 ←			11.08 ←
2016					7.98 ←		
2015	Grading						
2016							



# Theme: Scientific Literacy

Year	Code	Context					
		Like	Dislike	Useful	Challenge	Challenge Resolution	Suggestion
2015	Finding Articles						
2016				5.61 ←			
2015	Research Methods						
2016				12.70 ←			
2015	Citations						
2016				10.63 ←			
2015	Article Comprehension						
2016				14.33 ←	16.25 ←		
2015	Paraphrasing						
2016				6.35 ←			
2015	Data Comp. & Creation						
2016				19.50 ←	7.24 ←		



# Theme: Learning Strategies

Year	Code	Context						
		Like	Dislike	Useful	Challenge	Challenge Resolution	Suggestion	
2015	Critical Thinking			15.62 ←	5.29 ←			2015
2016				18.02 ←	5.17 ←			2016
2015	Note-Taking							
2016								
2015	Practice							
2016						9.30 ←		
2015	Time-Management	5.67 ←	9.19 ←					
2016					7.38 ←	7.09 ←		7.43 ←





# Other Themes

- **Learning Resources:**
  - **Online Resources:** 2016 only (Challenge Resolution – 7%)
- **Social Supports:**
  - **Prefect:** 2016 only (Challenge Resolution - 15%)
  - **Teamwork:** 2016 only (Useful - 6% and Challenge Resolution – 5%)
- **Lab Environment:**
  - **Labs (General):** Similar in both years (Like - Roughly 65%) and in 2015 (Useful - 5%)
  - **Lab Physical Environment:** 2016 only (Like – 37%)
  - **Lab Social Environment:** 2015 (Useful – 5%) and 2016 (Like – 15%)

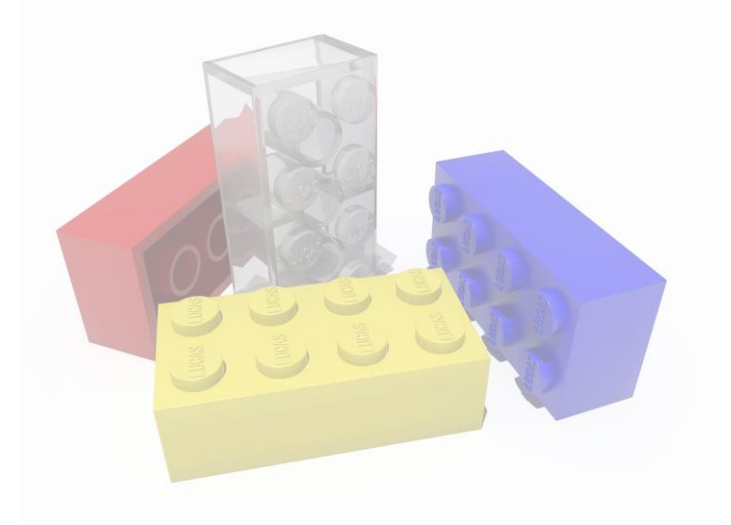


# Question Phrasing: 2015

Open ended questions:

↑ Suggestions

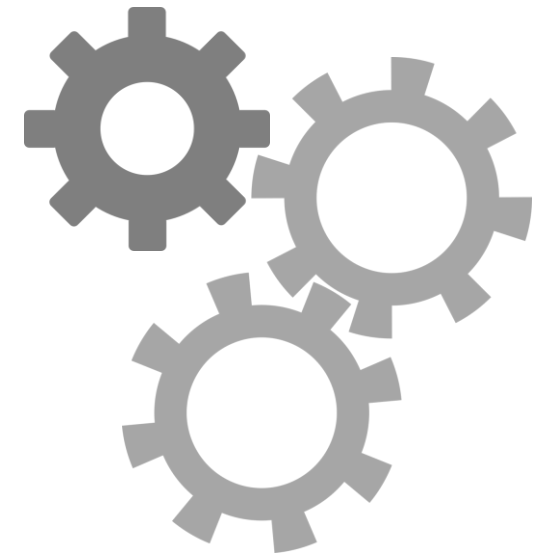
↑ Course Structure





# Question Phrasing: 2016

More specified questions resulted in students identifying concepts specific to the course *learning objectives* without being prompted.



# The Problem





# Enter Blue...





# BTA Attributes: Q1

What was the most useful skill you have learned from the lab/assignments?

Attributes - t&l [No. of comments]	norm across responses [311]
WORTHWHILE	33.44 %
HELPFUL/SUPPORTIVE	7.07 %
IMPORTANT	3.86 %
UNSPECIFIC FAVORABLE	2.57 %
WELL DELIVERED	1.61 %
RELEVANT	1.61 %
CLEAR	1.61 %
EASY	1.29 %
RIGHT AMOUNT	0.96 %
ORGANIZED	0.96 %





# BTA Elements: Q1

What was the most useful skill you have learned from the lab/assignments?

Elements mentioned [No. of comments]	norm across responses [311]
LABS	38.91 %
SKILLS	34.08 %
READINGS	24.12 %
CONTENT/MATERIALS	16.08 %
ASSIGNMENTS/EXAMS	14.47 %
COMPREHENSION	11.25 %
CONCEPTS/TOPICS	10.29 %
TECHNOLOGY	7.40 %
PRACTICAL ASPECTS	5.14 %
QUESTIONS	4.82 %



# Most Useful Skill From Lab/Assignments

BTA		Manual QDA	
Code	Frequency	Code	Frequency
LABS	38.91	DATA COMP. AND CREATION - USEFUL	23.15
SKILLS	34.08	CRITICAL THINKING - USEFUL	18.80
READINGS	24.12	ARTICLE COMPREHENSION - USEFUL	16.82
CONTENT/MATERIALS	16.08	RESEARCH METHODS - USEFUL	15.19
ASSIGNMENTS/EXAMS	14.47	CITATION - USEFUL	12.84
COMPREHENSION	11.25	ASSIGNMENTS - USEFUL	10.49
CONCEPTS/TOPICS	10.29	TIME MANAGEMENT - USEFUL	8.89
TECHNOLOGY	7.40	PARAPHRASING - USEFUL	7.78
PRACTICAL ASPECTS	5.14	TEAMWORK - USEFUL	7.23
QUESTIONS	4.82	FINDING ARTICLES – USEFUL	7.05



# BTA Attributes: Q2

Learning new skills can be challenging. What have you found most challenging so far in the PSYO1011 labs? What helped you in tackling these challenges?

Attributes - t&l [No. of comments]	norm across responses [268]
CHALLENGING	55.97 %
HELPFUL/SUPPORTIVE	34.33 %
DIFFICULT	19.78 %
EASY	5.22 %
POORLY DELIVERED	4.85 %
UNSPECIFIC FAVORABLE	4.48 %
UNCLEAR	3.73 %
WORTHWHILE	2.61 %
RIGHT AMOUNT	2.24 %
NEUTRAL	2.24 %



# BTA Elements: Q2

Learning new skills can be challenging. What have you found most challenging so far in the PSYO1011 labs? What helped you in tackling these challenges?

Elements mentioned [No. of comments]	norm across responses [268]
LABS	66.04 %
READINGS	29.10 %
QUESTIONS	16.42 %
CONTENT/MATERIALS	14.18 %
TECHNOLOGY	13.06 %



# Challenges & What Helped

BTA		Manual QDA	
Code	Frequency	Code	Frequency
LABS	66.04	ASSIGNMENT - CHALLENGE	32.35
READINGS	29.10	ARTICLE COMP. - CHALLENGE	21.57
QUESTIONS	16.42	PREFECT – CHALLENGE RES	20.00
CONTENT/MATERIALS	14.18	PRACTICE - CHALLENGE RES	11.17
TECHNOLOGY	13.06	GRADING - CHALLENGE	11.17
		DATA COMP. & CREATE - CHALLENGE	9.61
		ONLINE RESOURCE- CHALLENGE RES	9.41
		TIME MANAGEMENT -CHALLENGE	9.02
		TEAMWORK - CHALLENGE RES	6.67
		CRITICAL THINKING - CHALLENGE	6.47



# BTA is For...

- SRIs → Instructor
- Student Ratings of Labs







# BTA Attributes

What did your instructor do that helped your learning in this course or clinical setting?





# BTA Attributes

**What did your instructor do that helped your learning in this course or clinical setting?**

Attributes [No. of comments]	Course group [197]	Faculty [4816]	Dalhousie [17375]	Department [923]
INTERESTING	33.50 %	16.40 %	16.13 %	24.92 %
ENGAGING	21.83 %	14.10 %	14.26 %	17.77 %
FUNNY / ENTERTAINING	17.77 %	8.93 %	6.20 %	10.29 %
HELPFUL / SUPPORTIVE	24.37 %	26.85 %	29.48 %	29.04 %
ENTHUSIASTIC / DEDICATED	12.69 %	12.73 %	12.52 %	14.30 %
CLEAR	12.69 %	16.61 %	13.28 %	14.84 %
KNOWLEDGEABLE	7.61 %	6.04 %	7.02 %	5.96 %
EASY	7.11 %	7.58 %	6.28 %	6.72 %
ENJOYABLE	8.12 %	9.09 %	9.64 %	9.97 %
IMPORTANT / RELEVANT	6.09 %	10.47 %	12.35 %	11.16 %



# BTA Elements

**What did your instructor do that helped your learning in this course or clinical setting?**

Elements [No. of comments]	Course group [197]	Faculty [4816]	Dalhousie [17375]	Department [923]
STUDENTS	33.50 %	43.06 %	47.00 %	43.34 %
CLASS	28.93 %	26.81 %	30.34 %	34.45 %
PROFESSOR	22.84 %	22.22 %	22.77 %	22.97 %
LECTURES	16.75 %	16.07 %	14.04 %	20.26 %
EXAMPLES	14.21 %	12.48 %	9.40 %	17.88 %
SUBJECT MATTER	14.72 %	14.04 %	13.27 %	15.93 %
TECHNOLOGY	10.66 %	8.53 %	8.85 %	11.38 %
CONCEPTS_TOPICS	10.15 %	14.62 %	14.37 %	16.36 %
INSTRUCTION	13.20 %	11.13 %	10.32 %	11.27 %
LEARNING EXPERIENCE	11.68 %	11.67 %	15.00 %	14.52 %



# BTA Potential Issues

**What did your instructor do that helped your learning in this course or clinical setting?**

Potential issues [No. of comments]	Course group [197]	Faculty [4816]	Dalhousie [17375]	Department [923]
QUANTITY	31.98 %	31.19 %	31.11 %	35.75 %
TIME_ISSUES	0.51 %	0.89 %	1.39 %	0.76 %
VOICE ISSUES	1.02 %	1.60 %	1.35 %	1.63 %
WORKLOAD	0.00 %	0.52 %	0.67 %	0.65 %
MEMORIZATION	0.00 %	0.23 %	0.19 %	0.22 %
PACE	0.00 %	2.41 %	1.91 %	0.98 %



# Moving Forward

Fall 2020 - Survey Nova Scotia  
university course instructors:

- How to improve SRI reports
- 3 Keywords
- Evaluate Attributes and Elements





# Further Considerations

- **Longitudinal data**
  - Visualize personal growth
- **Further developments to BTA dictionaries**
  - Course format considerations (e.g., lecture vs. lab)
  - Allow for formative feedback on SRIs





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# Thank You!





# BTA Attributes: Q3

Do you find the lab environment a comfortable space for learning and participation? What might you change (if anything) to increase your comfort level for learning and participation?

Attributes - t&l [No. of comments]	norm across responses [340]
UNSPECIFIC FAVORABLE	69.41 %
PLEASANT/SAFE	11.47 %
WELL DELIVERED	9.12 %
EASY	5.59 %
ENJOYABLE	5.59 %
HELPFUL/SUPPORTIVE	5.00 %
UNSPECIFIC UNFAVORABLE	2.65 %
ENGAGING	2.35 %
UNHELPFUL/UNSUPPORTIVE	2.06 %
RIGHT AMOUNT	2.06 %



# BTA Elements: Q3

Do you find the lab environment a comfortable space for learning and participation? What might you change (if anything) to increase your comfort level for learning and participation?

Elements mentioned [No. of comments]	norm across responses [340]
LABS	50.59 %
LEARNING ATMOSPHERE	32.94 %
CLASSES	18.53 %
COMPREHENSION	12.06 %
STUDENTS	10.29 %
QUESTIONS	3.82 %
TEACHING ASSISTANTS/TUTORS	2.65 %
IN-CLASS WORK	2.06 %
DISCUSSION	1.76 %
LECTURES	1.47 %



# Lab Comfort & Improvements

BTA		Manual QDA	
Code	Frequency	Code	Frequency
LABS	50.59	LABS (GENERAL) - LIKE	65.80
LEARNING ATMOSPHERE	32.94	PHYSICAL ENVIRONMENT - LIKE	42.61
CLASSES	18.53	SOCIAL ENVIRONMENT - LIKE	16.83
COMPREHENSION	12.06	SOCIAL ENVIRONMENT - SUGGESTION	6.83
STUDENTS	10.29		



# Theme: Learning Resources

Year	Code	Context					
		Like	Dislike	Useful	Challenge	Challenge Resolution	Suggestion
2015	Course Text Resources						
2016							
2015	Online Resources						
2016						7.09	



# Theme: Social Supports

Year	Code	Context					
		Like	Dislike	Useful	Challenge	Challenge Resolution	Suggestion
2015	Prefect						
2016						15.36	
2015	Teamwork						
2016				6.20		5.17	



# Theme: Lab Environment

Year	Code	Context					
		Like	Dislike	Useful	Challenge	Challenge Resolution	Suggestion
2015	Lab Physical Environment	37.07					
2016							
2015	Lab Social Environment	5.16					
2016							
2015	Labs (General)	64.36					
2016							
		65.43					