ACHPER Queensland
Professional Learning 2022

Senior Health Uncovered
Teaching Health General Senior Syllabus 2019 v1.2

QUT the university for the real world

achper QUEENSLAND

We will commence at 9:05 am

Acknowledgment of Country

Artwork: *Sharing Knowledge*
Artist: Hayden Bartlett – HPE Teacher & QUT Graduate

ACKNOWLEDGEMENT OF TRADITIONAL OWNERS

QUT acknowledges the Turrbal and Yugara, as the First Nations owners of the lands where QUT now stands. We pay respect to their Elders, lores, customs and creation spirits. We recognise that these lands have always been places of teaching, research and learning.

QUT acknowledges the important role Aboriginal and Torres Strait Islander people play within the QUT community.

QUT

Presenters

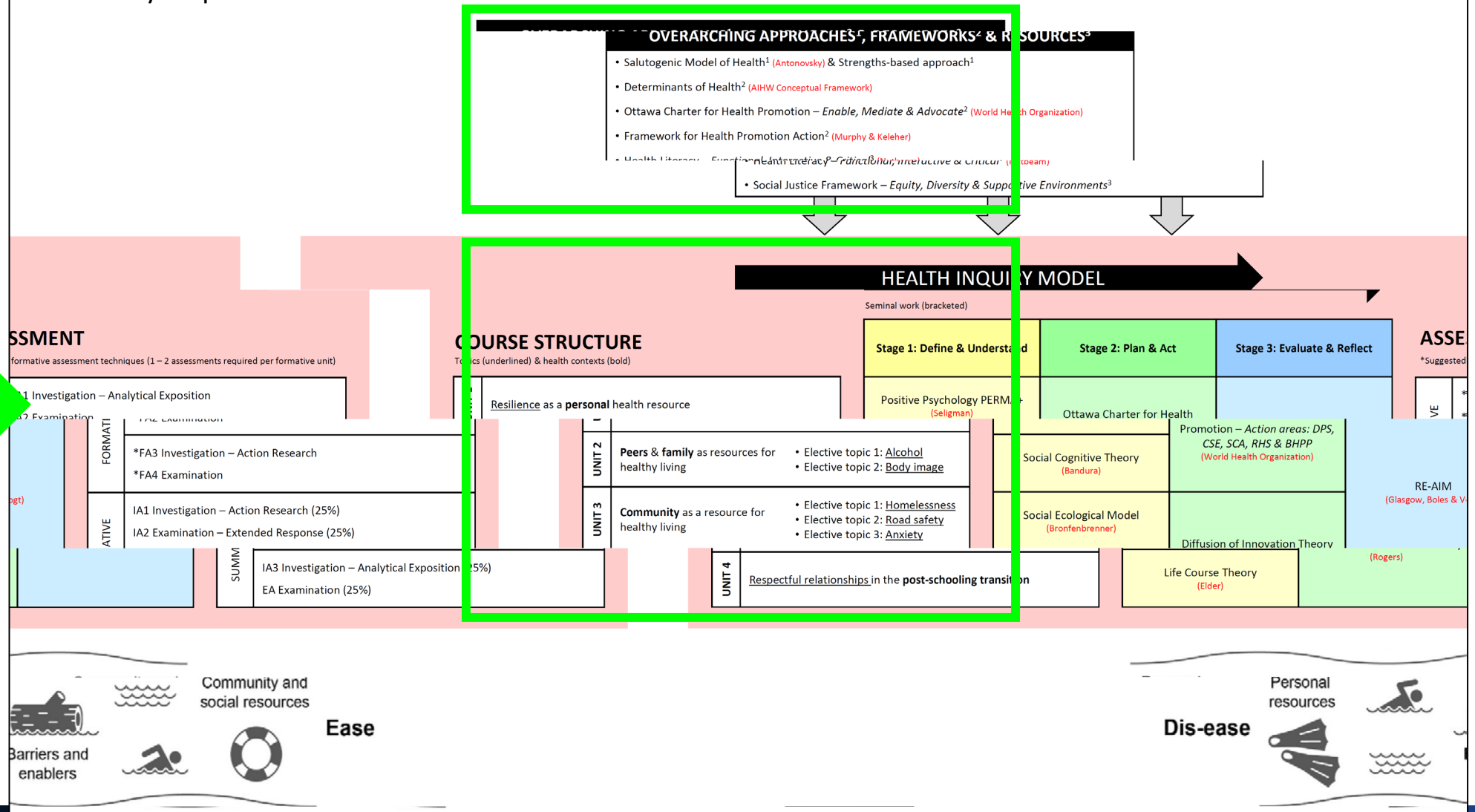
- **Carly Valente** – Moreton Bay College
- **Carolyn Jones** – Queensland Curriculum & Assessment Authority
- **Dr Louise McCuaig** – Matthew Flinders Anglican College
- **Dr Hugh Shannon** – Queensland University of Technology

Program overview

Time	Session topics	Presenters
9:15 – 10:15	**Salutogenesis – Understanding the river of life**	Dr Louise McCuaig
10:15 – 10:30	Break	
10:30 – 11:30	**Overarching frameworks & resources of Senior Health**	Carolyn Jones & Dr Hugh Shannon
11:30 – 12:45	**Using the health inquiry model for a purpose (Unit 1)**	Carly Valente
12:45 – 1:15	Break	
1:15 – 2:15	**Effective data collection & analysis**	Dr Hugh Shannon
2:15 – 3:00	**Panel discussion & concluding remarks**	All presenters

Health General Senior Syllabus 2019 v1.2

Summary map



phor diagram published with permission (Source: QCAA Health General Senior Syllabus 2019 v1.2 p. 10)

'River of Life' meta

Correspondence: Dr Hugh Shannon h.shannon@qut.edu.au

Version: February 2022

Resources

Presentation resources will be available via ACHPER Queensland.

Thank you to all presenters for developing and sharing them.

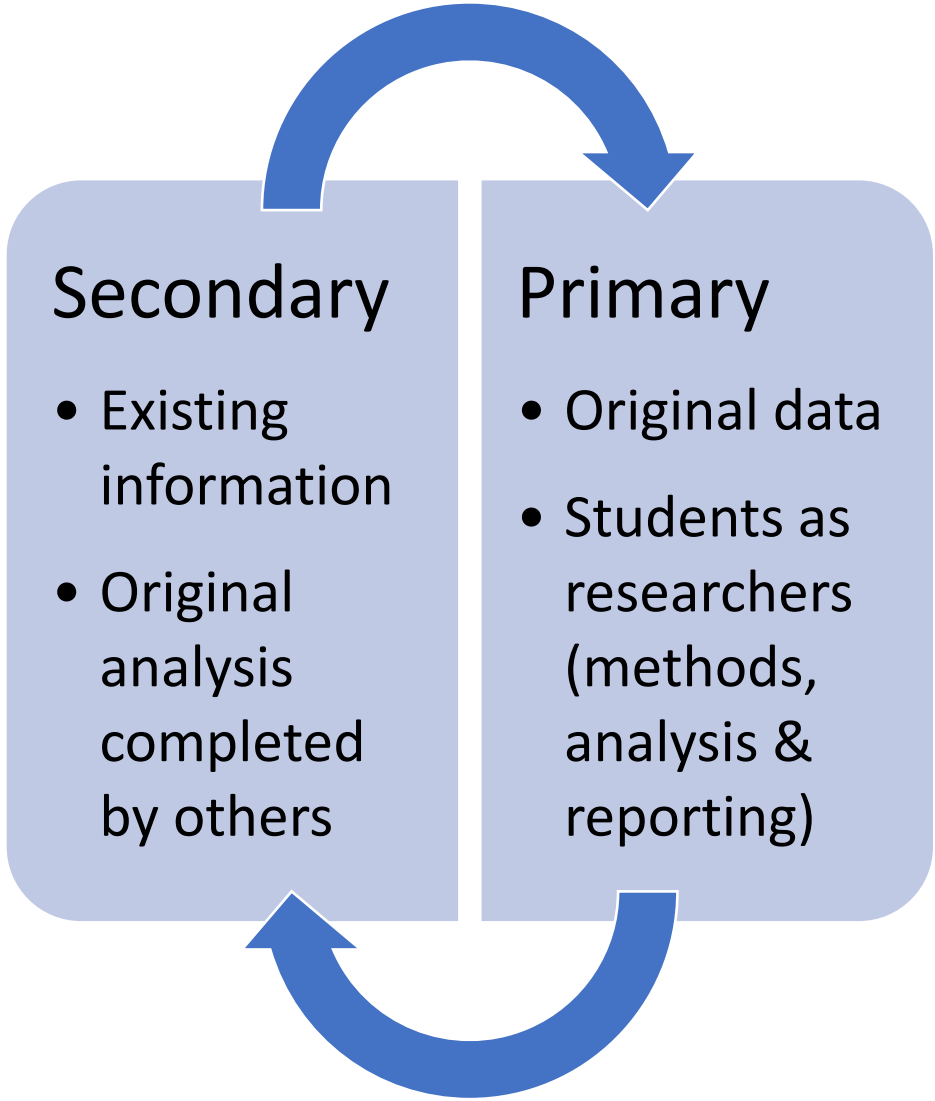
EFFECTIVE DATA COLLECTION & ANALYSIS

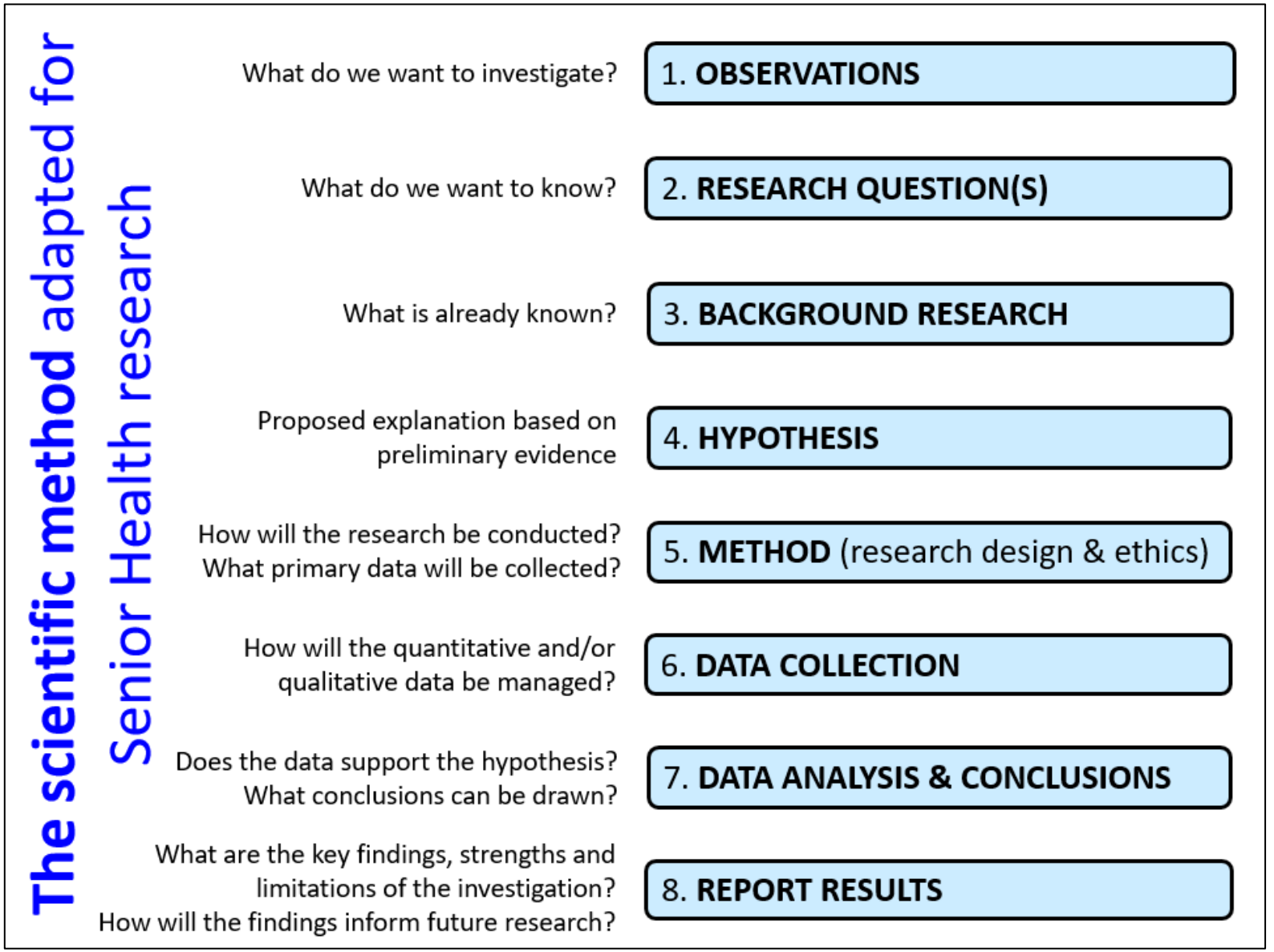
PRESENTER

Dr Hugh Shannon, Queensland University of Technology

Primary & secondary research

- Some schools utilise legacy data




The scientific method adapted for Senior Health research
What do we want to investigate?
1. OBSERVATIONS
What do we want to know?
2. RESEARCH QUESTION(S)
What is already known?
3. BACKGROUND RESEARCH
Proposed explanation based on preliminary evidence
4. HYPOTHESIS
How will the research be conducted? What primary data will be collected?
5. METHOD (research design & ethics)
How will the quantitative and/or qualitative data be managed?
6. DATA COLLECTION
Does the data support the hypothesis? What conclusions can be drawn?
7. DATA ANALYSIS & CONCLUSIONS
What are the key findings, strengths and limitations of the investigation? How will the findings inform future research?
8. REPORT RESULTS

SECONDARY RESEARCH

Secondary research examples

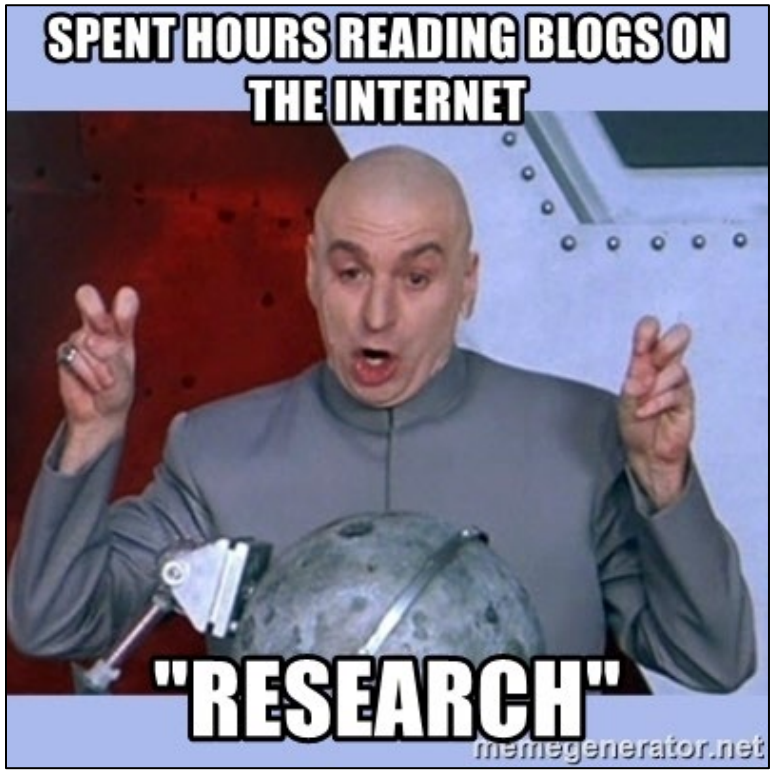
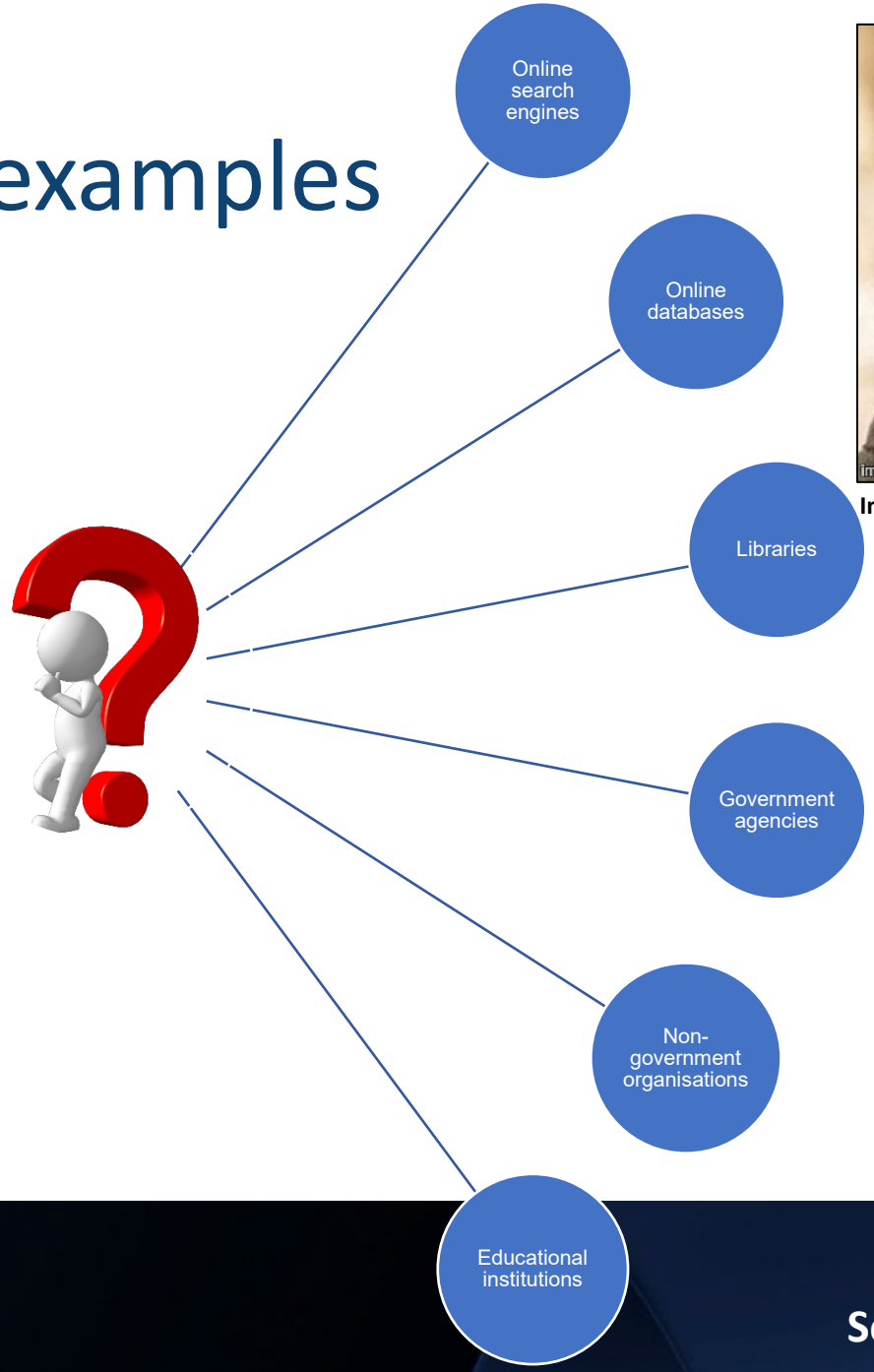


Image source: https://memegenerator.net/instance/58860780/dr-evil-meme-spent-hours-reading-blogs-on-the-internet-research



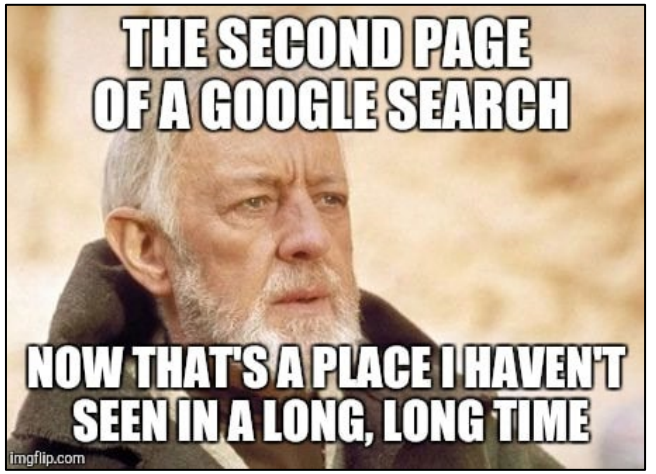
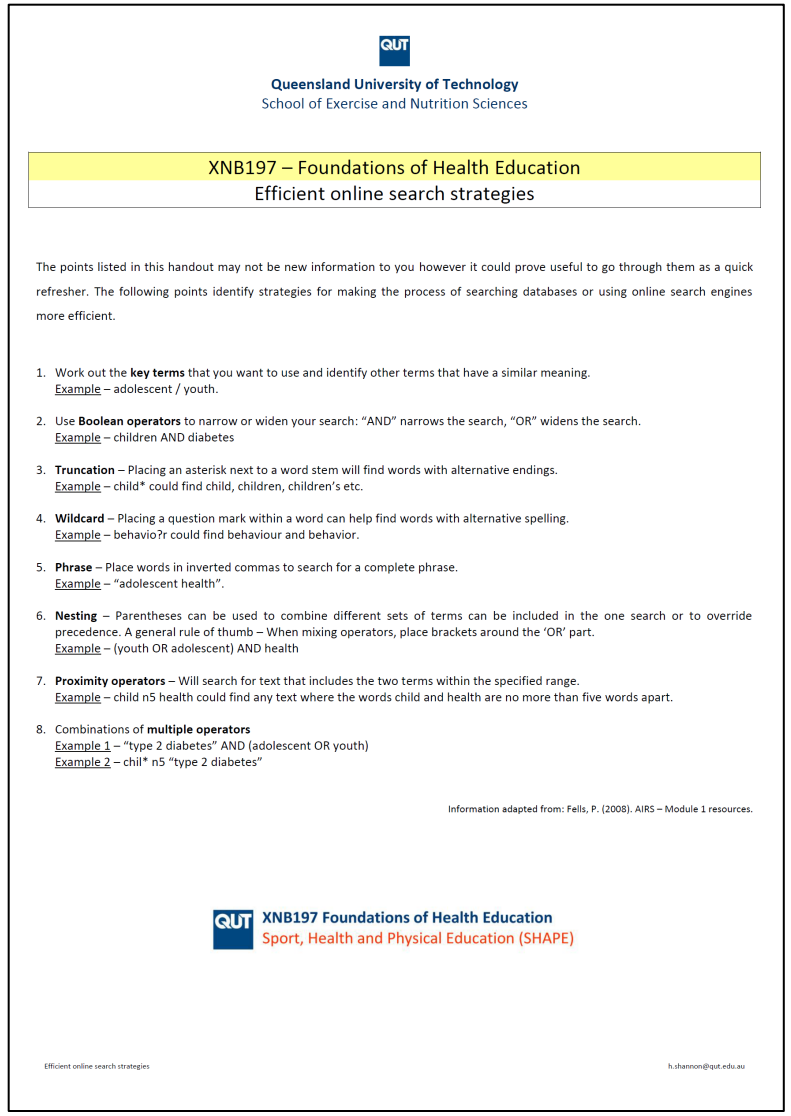


Image source: https://faithrpsite.weebly.com/memes.html

Online search efficacy & efficiency

Resource – Online search strategies:

- Search engines
- Databases



Queensland University of Technology
School of Exercise and Nutrition Sciences

XNB197 – Foundations of Health Education
Efficient online search strategies

The points listed in this handout may not be new information to you however it could prove useful to go through them as a quick refresher. The following points identify strategies for making the process of searching databases or using online search engines more efficient.

1. Work out the **key terms** that you want to use and identify other terms that have a similar meaning.
   Example – adolescent / youth.
2. Use **Boolean operators** to narrow or widen your search: "AND" narrows the search, "OR" widens the search.
   Example – children AND diabetes
3. **Truncation** – Placing an asterisk next to a word stem will find words with alternative endings.
   Example – child* could find child, children, children's etc.
4. **Wildcard** – Placing a question mark within a word can help find words with alternative spelling.
   Example – behavio?r could find behaviour and behavior.
5. **Phrase** – Place words in inverted commas to search for a complete phrase.
   Example – "adolescent health".
6. **Nesting** – Parentheses can be used to combine different sets of terms can be included in the one search or to override precedence. A general rule of thumb – When mixing operators, place brackets around the 'OR' part.
   Example – (youth OR adolescent) AND health
7. **Proximity operators** – Will search for text that includes the two terms within the specified range.
   Example – child n5 health could find any text where the words child and health are no more than five words apart.
8. Combinations of **multiple operators**
   Example 1 – "type 2 diabetes" AND (adolescent OR youth)
   Example 2 – chil* n5 "type 2 diabetes"

Information adapted from: Fells, P. (2008). AIRS – Module 1 resources.

XNB197 Foundations of Health Education
Sport, Health and Physical Education (SHAPE)

Efficient online search strategies

h.shannon@qut.edu.au

1. Work out the **key terms** that you want to use and identify other terms that have a similar meaning.
   Example – adolescent / youth.

2. Use **Boolean operators** to narrow or widen your search: "AND" narrows the search, "OR" widens the search.
   Example – children AND diabetes

3. **Truncation** – Placing an asterisk next to a word stem will find words with alternative endings.
   Example – child* could find child, children, children's etc.

4. **Wildcard** – Placing a question mark within a word can help find words with alternative spelling.
   Example – behavio?r could find behaviour and behavior.

5. **Phrase** – Place words in inverted commas to search for a complete phrase.
   Example – "adolescent health".

6. **Nesting** – Parentheses can be used to combine different sets of terms can be included in the one search or to override precedence. A general rule of thumb – When mixing operators, place brackets around the 'OR' part.
   Example – (youth OR adolescent) AND health

7. **Proximity operators** – Will search for text that includes the two terms within the specified range.
   Example – child n5 health could find any text where the words child and health are no more than five words apart.

8. Combinations of **multiple operators**
   Example 1 – "type 2 diabetes" AND (adolescent OR youth)
   Example 2 – chil* n5 "type 2 diabetes"

Confirmation bias

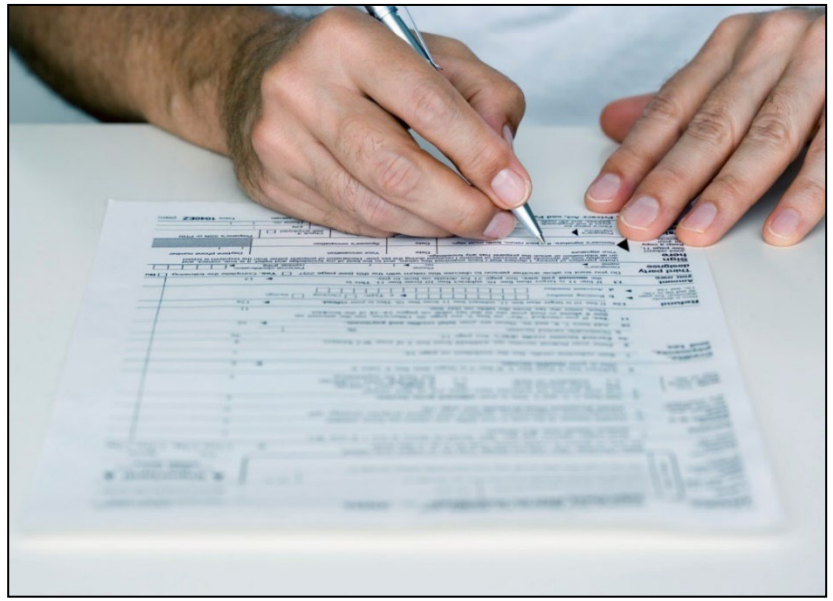
- Students may be susceptible when searching online or undertaking primary data analysis
- Can be reinforced by social media and search engine algorithms

Infographic source: https://newslit.org/tips-tools/dont-let-confirmation-bias-narrow-your-perspective/

ETHICAL PRIMARY RESEARCH CONSIDERATIONS

Research

What would be your normal reaction if someone approached you on the street or in a shopping centre and asked you to participate in research? Be honest :)



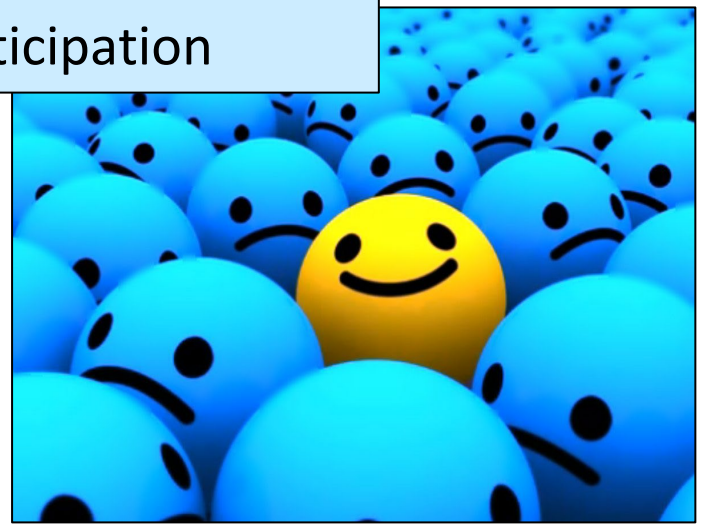
Senior Health students & teachers need to understand & demonstrate ethical practices to ***establish trust,*** *encourage the highest possible* ***response rates,*** *promote* ***veracity*** *&* ***support future research****.*

Ethical considerations

1. Confidentiality
2. Informed consent
3. Secure data management
4. Participant feedback
5. Reporting data

Necessary to enable:

- Participant reassurance & trust
- Participant rights
- Strong response rates
- Future research participation



Ethical considerations – *Confidentiality*

Anonymous data:

- Researchers are not able to identify who the participants are
- Example: questionnaire with non-identifiable demographic data

De-identified data:

- Researchers know who the participants are, but protect their identity by designating unique labels for each participant such as P1, P2, P3...
- Examples: semi-structured interview, semi-structured focus group or field observation

Ethical considerations – *Informed consent*

- Research **purpose, confidentiality** & invitation to **voluntarily participate**
  - ✓ Why is this research being conducted?
- Explanation of **procedures**
  - ✓ What will the participant need to do? What is the time commitment?
- **Voluntary participation** & **right of withdrawal**
- Anticipated **benefits,** potential **risks** & **addressing concerns**
  - ✓ What is the potential value of this research?
  - ✓ Are there any risks beyond normal day-to-day living and how will they be managed? (e.g. teacher listed as the contact point & school leaders should know about the projects)

Meme source: https://lovestats.wordpress.com/dman/survey-research-statistics-meme/

Ethical considerations – *Secure data management*

- All data should be stored in a secure manner
- Examples:
  - ✓Questionnaires locked in a filing cabinet in the teacher's staff room
  - ✓Password protected folders on a secure school network drive

Ethical considerations – *Participant feedback*

Sometimes neglected in school projects, but very important for establishing a positive research experience & encouraging future participation

- Gratitude should be conveyed to participants & the value of their input should be emphasised
- A summary of the main results or findings should be made available to all participants (can be at a school community level)

Ethical considerations – *Reporting data*

*Data must be presented in a way that ensures participant **confidentiality***

- Quantitative data should be presented as aggregated (grouped) data, not individual quantitative data
- Aggregated quantitative data can be categorised according to demographic characteristics (e.g. gender or age) for comparative purposes
- Qualitative data should be presented as aggregated (grouped) data representing the main themes
- Individual participant qualitative responses can be presented as quotes to highlight examples, however they must be represented by de-identified labels (e.g. P1, P2, P3…)

COMMON PRIMARY DATA COLLECTION METHODS

Common primary data collection methods

Semi-structured interview:

- List of prepared questions *(-structured*) which can be extended upon during the interview as participant responses emerge (*semi-*)
- Responses are recorded (with permission) & transcribed (typed verbatim) for analysis

Semi-structured focus group:

- As per the interview description, but completed with a group of participants at the same time
- The size of the focus group requires careful consideration to encourage participation (ideally less than 10 as some may not contribute when the group is larger)

Common primary data collection methods

Questionnaire:

- Demographic data items (e.g. age, gender, geographical location of residence, year level, target groups if more than one: these variables could be used to make comparisons between sub-groups when analysing questionnaire data)
- Quantitative data items: dichotomous (e.g. Yes/No), interval scales (e.g. Likert 5 point: SA, A, N, D & SD) & continuous scales (e.g. visual analogue scale where respondents mark a point anywhere on a line that reflects their level of agreement)
- Qualitative response items

Common primary data collection methods

Field observation:

- Criteria for observing & recording behaviours
- Checklist style form for recording quantitative data
- Space for observational notes (qualitative data)

Resource – Research instrument tips

XNB394 Advanced Health Education – **Research Instrument Tips**

QUESTIONNAIRE	SEMI-STRUCTURED INTERVIEW OR FOCUS GROUP	FIELD OBSERVATION
Components: • Participant instructions explaining why the data is being collected, estimated time commitment, indicating return of the completed questionnaire reflects participant consent, & an explanation of how to respond to the items (e.g. tick/cross the boxes & write comments on the lines/within the boxes provided) • Include demographic response items that will enable interesting comparisons during the analysis (e.g. age, gender, postcode) • Review your research objectives & hypothesis, then prepare a list of items (questions and/or statements) that will generate valuable data (consider what scale types are necessary: e.g. even numbered Likert interval scales with some dichotomous scales) • Include some qualitative comment items to help participants explain their responses to particular items Principles: • Clear, concise & age appropriate language • No leading questions or statements (should not influence the response or lead them to a response which may not be accurate) • Consistent & user friendly layout • Suitable length (sufficient data but not excessive, e.g. demographic items plus 10 - 15 items aligned with your research objectives)	Components: • Instructions able to be read to participants explaining what will occur & why, estimated time commitment, seeking participant consent, seeking permission to record, & explanation of the need to wait for the whole question to be asked or others to respond before answering • Space for procedural notes (e.g. date, location & duration) • Review your research objectives & hypothesis, then prepare a list of questions that will generate valuable data • Leave space between questions for notes (e.g. additional questions or to support analysis) Principles: • Clear, concise & age appropriate language • No leading questions or statements (should not influence the response or lead them to a response which may not be accurate) • Logical order • Suitable length (sufficient data but not excessive, e.g. 10 - 15 items aligned with your research objectives)	Components: • Community information statement disclosing what will occur & why (able to be shared with school leadership team & via broader communication channels such as newsletter, website, social media or assemblies) • Space for procedural notes (e.g. date, location & duration) • Review your research objectives & hypothesis, then prepare a list of observational foci or criteria that enable behaviours to be recorded (include space for quantitative & qualitative data) Principles: • Clear & easy to navigate layout (rapid data entry may be required for real-time observation) • Sufficient space for the type of data collected

XNB394 Research instrument development tips.doc h.shannon@qut.edu.au

- Clear & concise: prevent respondent fatigue & formatting OCD :)
- No leading questions for open responses!

Example leading question and statement:
Our presentation successfully raised awareness of X. What aspects of our presentation influenced why you believe X is so important?

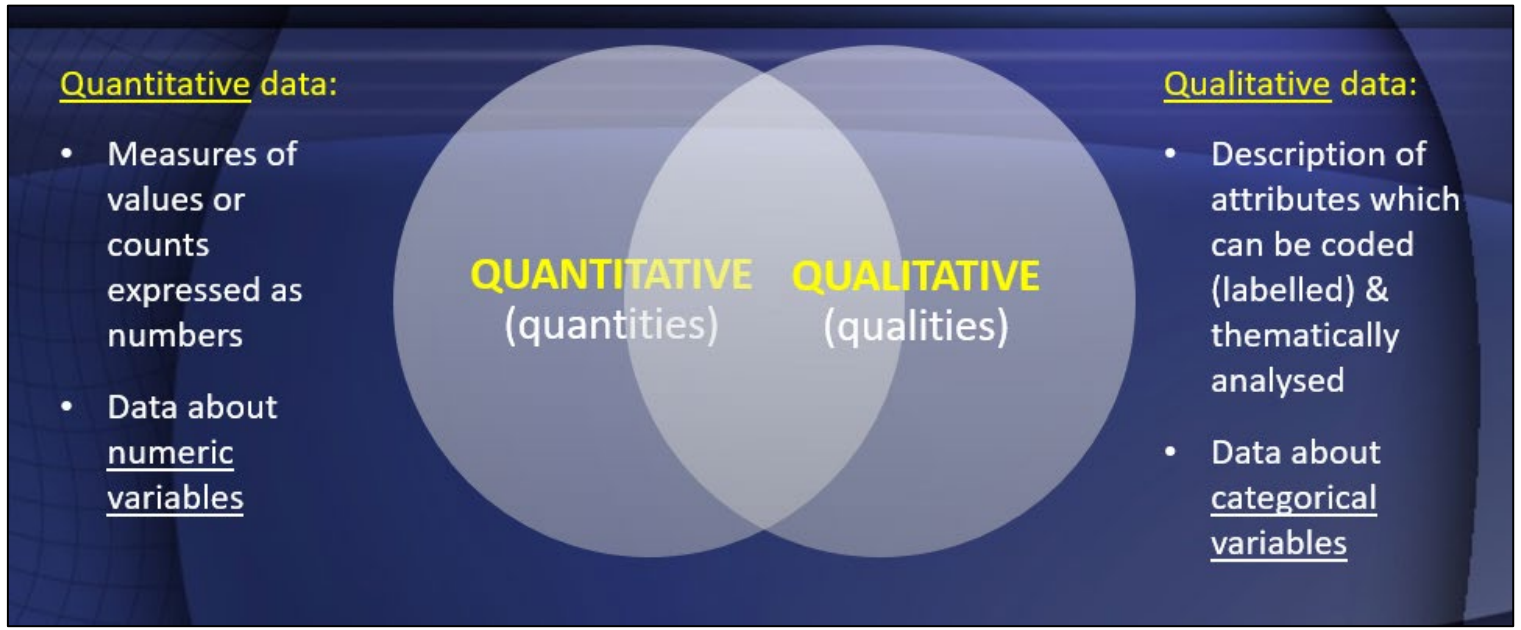
How many questions?

Quality over quantity!

Excessive Q may be due to:	Potential impacts:	Strategies:
• Fear of not having enough information to work with • Insufficient confidence in the efficacy of questions	• Lower response rate • Lower re-completion rate (time series data) requiring a higher inflation factor	• Focussed planning (What do I/we want to determine?) • Pilot/trial testing (small target group sample)

RESEARCH STUDY DESIGN

Data types



- Quantitative = *numbers*
- Qualitative = *words*

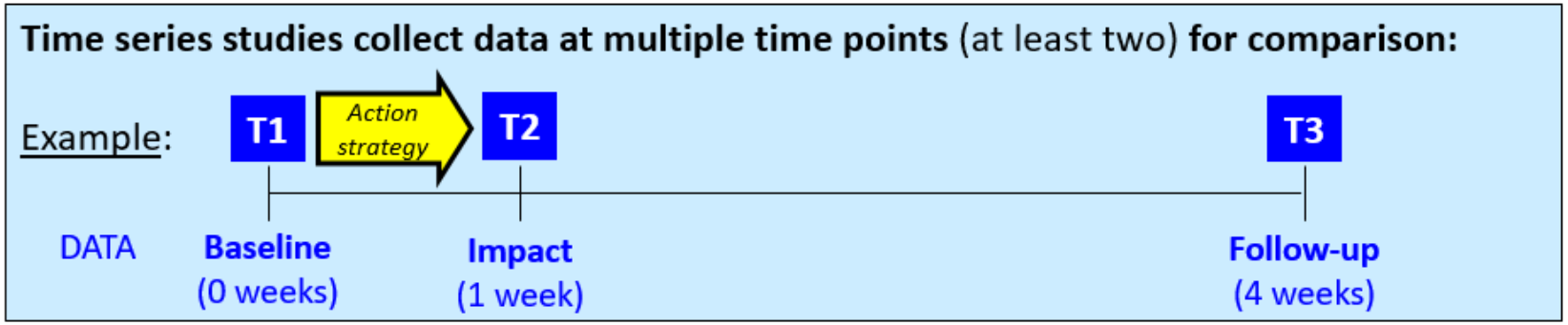
Definition source p.102: ABS 2013 cited in Health 2019 v1.2 General Senior Syllabus (QCAA)

Research study design

- **What primary data collection method?** (e.g. semi-structured interview, focus group, questionnaire or field observation)
- **What type/s of data?** (e.g. quantitative, qualitative or both)

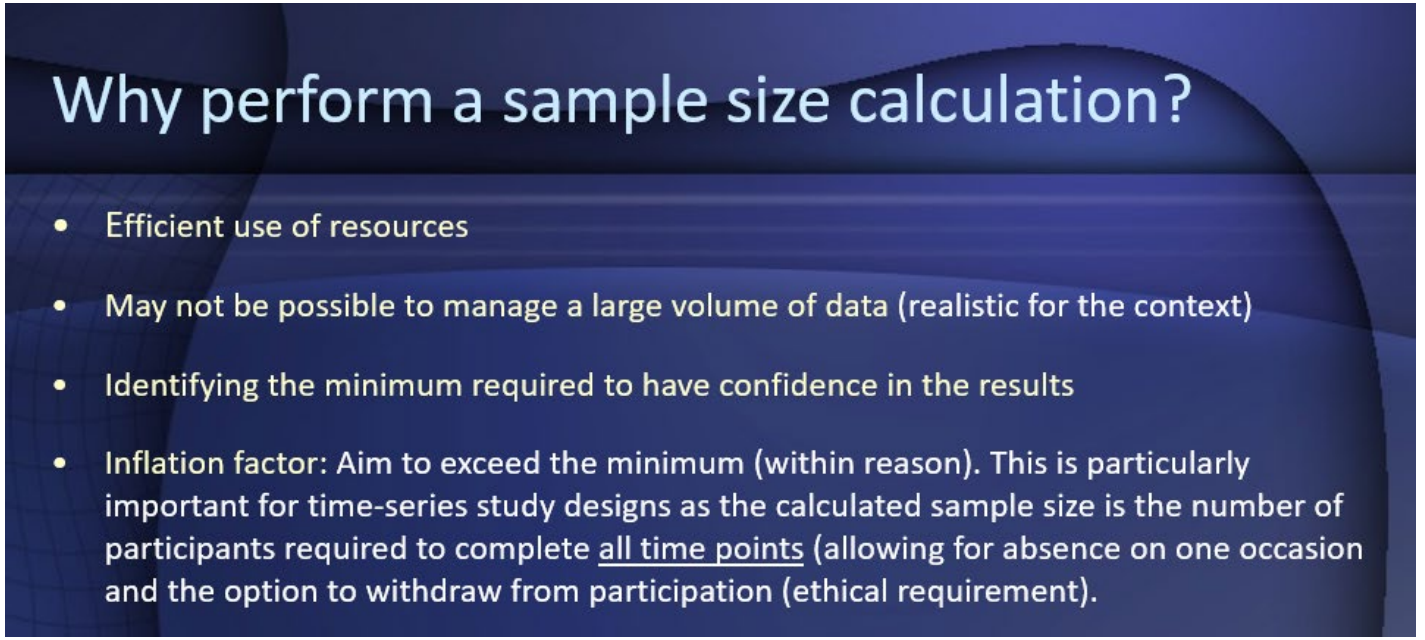
Research study design

- **How many data collection time points?**
  - **Time-series studies** collect data at two or more time points
  - Two time points will enable pre and post implementation comparisons
  - Three time points enable follow-up data which may provide preliminary indicators of maintenance



Research study design

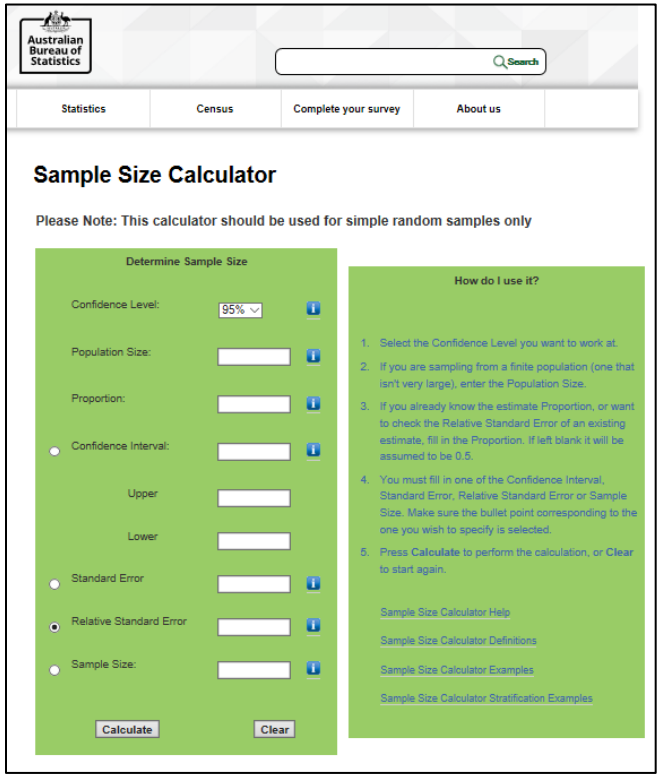
- **What is the target group?**
- **How many people do we need?**



Activity – Sample size calculation

- **What is your target group?** Describe them & estimate the target group size (N=?)
- **What is the minimum sample size required?** Complete a sample size calculation, report the minimum sample size required (n=?) & report the applied Confidence Level, Proportion & Relative Standard Error (RSE)

ABS online calculator: http://tinyurl.com/y4csfavd



Recommended settings:

- Confidence Level 95%
- Proportion 0.75
- RSE 10

*Click on the **blue information icon** next to each of these inputs to develop your understanding of the terms.*

ABS website:
www.abs.gov.au/websitedbs/D3310114.nsf/home/Sample+Size+Calculator

Sample size inflation factor (time-series studies)

- If utilising a time series study design, your ‘n’ value is the minimum number of people that must complete all time points
- We need to account for attrition: people who may be absent or choose not to complete T2 and/or T3

We can prepare for this situation by applying an inflation factor

- Example 1 – Two time points: If we are aiming for 70% of the starting group to complete T2, our inflation factor is 1.3 x ‘n’
- Example 2 – Three time points: if we are aiming for 70% of the starting group to complete T2 and T3, our inflation factor is 1.3 x 1.3 x ‘n’ or 1.69 x ‘n’

DATA ANALYSIS

Quantitative data analysis

Measures of central tendency

- Mean
- Median
- Mode

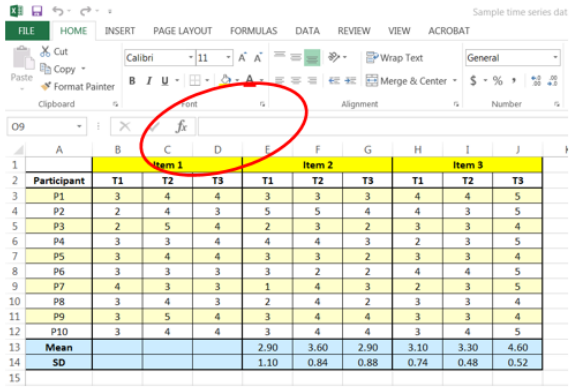
Measures of variability

- Range
- Standard deviation (quantifies variability or dispersion)

Reporting example:
Sample group age range 17 – 56 years (*M* = 38.60, *SD* = 10.25)

Activity – Quantitative data analysis

Data management skills – Excel functionality



	Participant	Item 1			Item 2			Item 3		
		T1	T2	T3	T1	T2	T3	T1	T2	T3
3	P1	3	4	4	3	3	3	4	4	5
4	P2	2	4	3	5	5	4	4	3	5
5	P3	2	5	4	2	3	2	3	3	4
6	P4	3	3	4	4	4	3	2	3	5
7	P5	3	4	4	3	3	2	3	3	4
8	P6	3	3	3	3	2	2	4	4	5
9	P7	4	3	3	1	4	3	2	3	5
10	P8	3	4	3	2	4	2	3	3	4
11	P9	3	5	4	3	4	4	3	3	4
12	P10	3	4	4	3	4	4	3	4	5
13	Mean				2.90	3.60	2.90	3.10	3.30	4.60
14	SD				1.10	0.84	0.88	0.74	0.48	0.52

Function: =SUM(A1:A10) — Argument

A range of cells has a starting cell, colon, and an ending cell. When you select a range of cells for a formula, Excel will automatically add the colon.

Examples of functions:
=SUM
=AVERAGE
=COUNT
=STDEV
=MIN
=MAX

ACTIVITY:

1. Download the quantitative sample from the Blackboard site Week 6 Tutorial folder
2. Set up formulae to calculate mean & standard deviation for Item 1 (T1, T2 & T3)
3. Discuss the results & process – *Potential foci: standard deviation (SD) is a measure of variability & how students might interpret results (e.g. the mid-point for this scale is 3 not 2.5)*

XNB394 Advanced Health Education

Demonstration spreadsheet files

1. Sample time series data (formulae removed)
2. Sample time series data

Qualitative data analysis

- **Systematically extracting meaning from text** (e.g. interview transcripts, focus group transcripts, written questionnaire responses & field observation notes)
- Analytical process of **coding** (labelling), organizing, sorting & synthesising qualitative data to enable **identification of significant themes**
- Coding involves assigning a word, phrase, number or symbol to the associated text (labelling process)

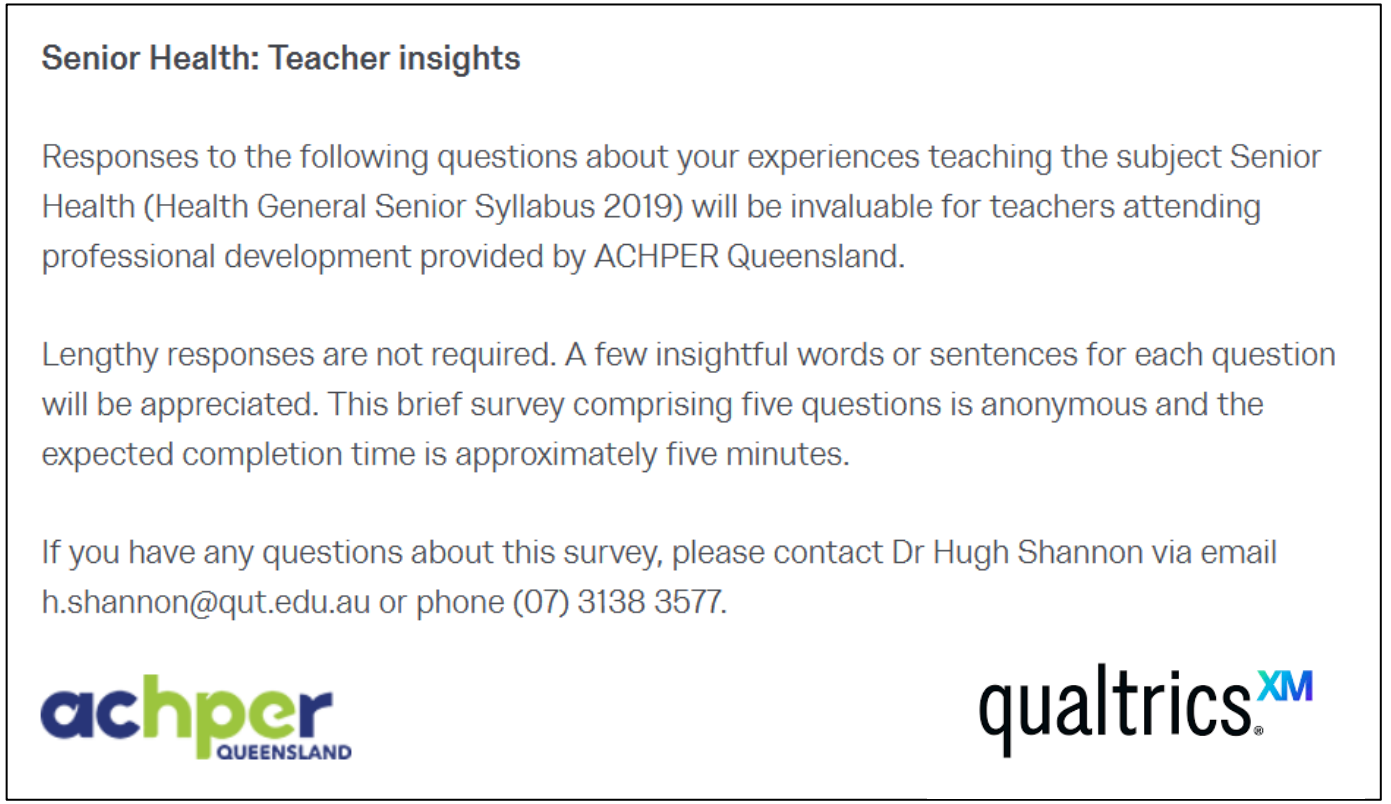
SENIOR HEALTH: TEACHER INSIGHTS SURVEY

ACKNOWLEDGEMENT

Survey respondents – Queensland Senior Health teachers

Background

- Distributed via EQ Senior Health Discussion list & Senior Health Education QLD Facebook group
- Respondents: Queensland Senior Health teachers (n=53)
- Brief 5-item survey (anonymous)



Senior Health: Teacher insights

Responses to the following questions about your experiences teaching the subject Senior Health (Health General Senior Syllabus 2019) will be invaluable for teachers attending professional development provided by ACHPER Queensland.

Lengthy responses are not required. A few insightful words or sentences for each question will be appreciated. This brief survey comprising five questions is anonymous and the expected completion time is approximately five minutes.

If you have any questions about this survey, please contact Dr Hugh Shannon via email h.shannon@qut.edu.au or phone (07) 3138 3577.

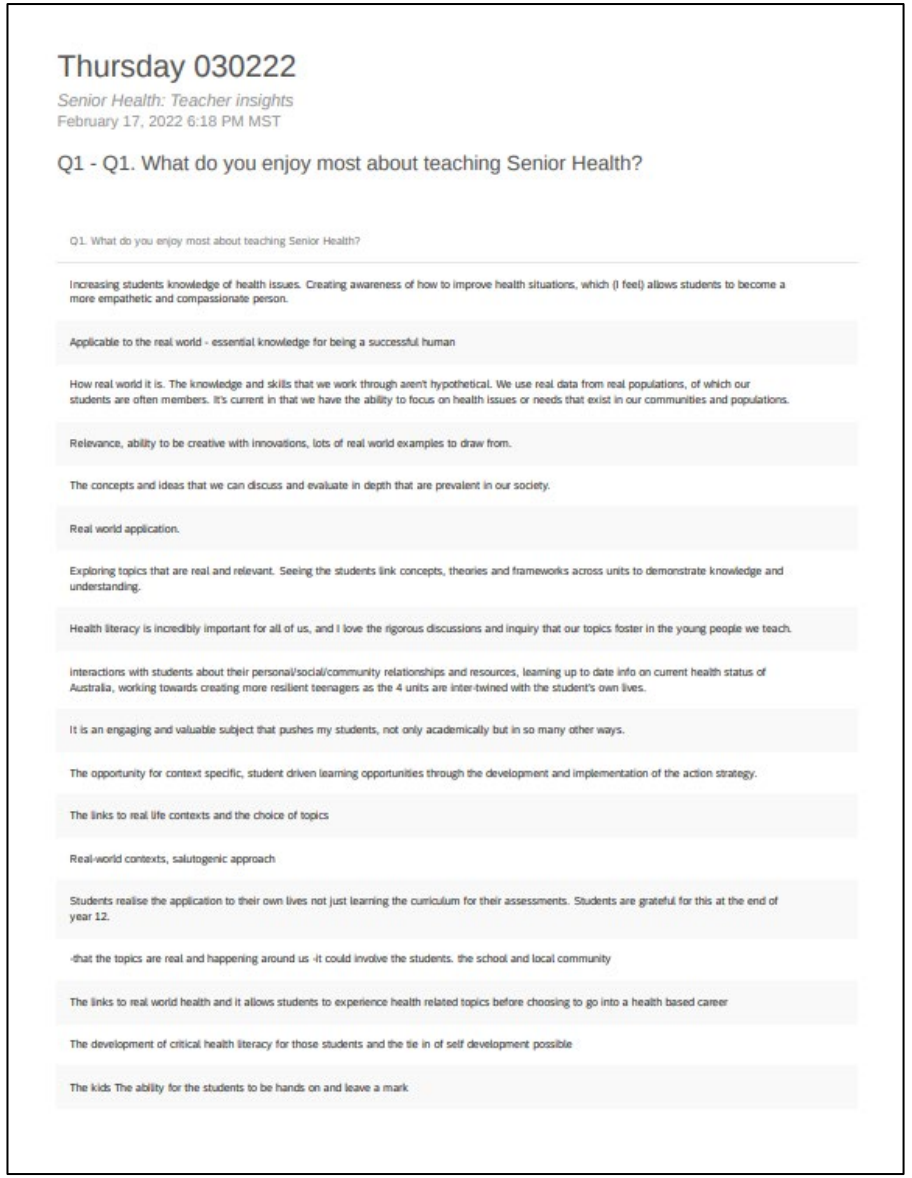
Background

Survey items	
1	What do you enjoy most about teaching Senior Health?
2	Why is Senior Health a valuable subject for your students to study?
3	What strategies do you use to promote student motivation to learn and complete assessment?
4	What do students find most challenging about Senior Health and how do you overcome these challenges?
5	Have you observed any misconceptions* amongst staff, students or parents about the subject Senior Health? If so, what are they and how do you address them?

*Definition - Misconception: *An inaccurate idea, belief, view or opinion due to misunderstanding or incorrect assumptions.*

Survey data

- You have been emailed a copy of the raw data
- I encourage you to take the time to read it and consider the suggestions and strategies
- We will explore some samples…



Thursday 030222

Senior Health: Teacher insights

February 17, 2022 6:18 PM MST

Q1 - Q1. What do you enjoy most about teaching Senior Health?

Q1. What do you enjoy most about teaching Senior Health?
Increasing students knowledge of health issues. Creating awareness of how to improve health situations, which (I feel) allows students to become a more empathetic and compassionate person.
Applicable to the real world - essential knowledge for being a successful human
How real world it is. The knowledge and skills that we work through aren't hypothetical. We use real data from real populations, of which our students are often members. It's current in that we have the ability to focus on health issues or needs that exist in our communities and populations.
Relevance, ability to be creative with innovations, lots of real world examples to draw from.
The concepts and ideas that we can discuss and evaluate in depth that are prevalent in our society.
Real world application.
Exploring topics that are real and relevant. Seeing the students link concepts, theories and frameworks across units to demonstrate knowledge and understanding.
Health literacy is incredibly important for all of us, and I love the rigorous discussions and inquiry that our topics foster in the young people we teach.
interactions with students about their personal/social/community relationships and resources, learning up to date info on current health status of Australia, working towards creating more resilient teenagers as the 4 units are inter-twined with the student's own lives.
It is an engaging and valuable subject that pushes my students, not only academically but in so many other ways.
The opportunity for context specific, student driven learning opportunities through the development and implementation of the action strategy.
The links to real life contexts and the choice of topics
Real-world contexts, salutogenic approach
Students realise the application to their own lives not just learning the curriculum for their assessments. Students are grateful for this at the end of year 12.
-that the topics are real and happening around us -it could involve the students. the school and local community
The links to real world health and it allows students to experience health related topics before choosing to go into a health based career
The development of critical health literacy for those students and the tie in of self development possible
The kids The ability for the students to be hands on and leave a mark

Qualitative coding, thematic analysis & frequency mapping

Something to ponder…

The potential of education as a powerful tool for social mobilisation has been lost in some cases through health promotion intervention that is ***"…done 'on' or 'to' people, rather than 'by' or 'with' people."*** (Nutbeam, 2000, p.265)

Source: Nutbeam, D. (2000). Health literacy as a public health goal: A challenge for contemporary health education and communication strategies into the 21st century. *Health Promotion International, 15*(3), 259-267.

QUESTIONS?

Use the chat box to post a question

PANEL DISCUSSION

Panellists: **Carly Valente**, **Carolyn Jones** & **Dr Louise McCuaig**

Moderator: **Dr Hugh Shannon**

QUESTIONS?

Use the chat box to post a question

ACKNOWLEDGEMENTS & CONCLUSION

Kintsugi

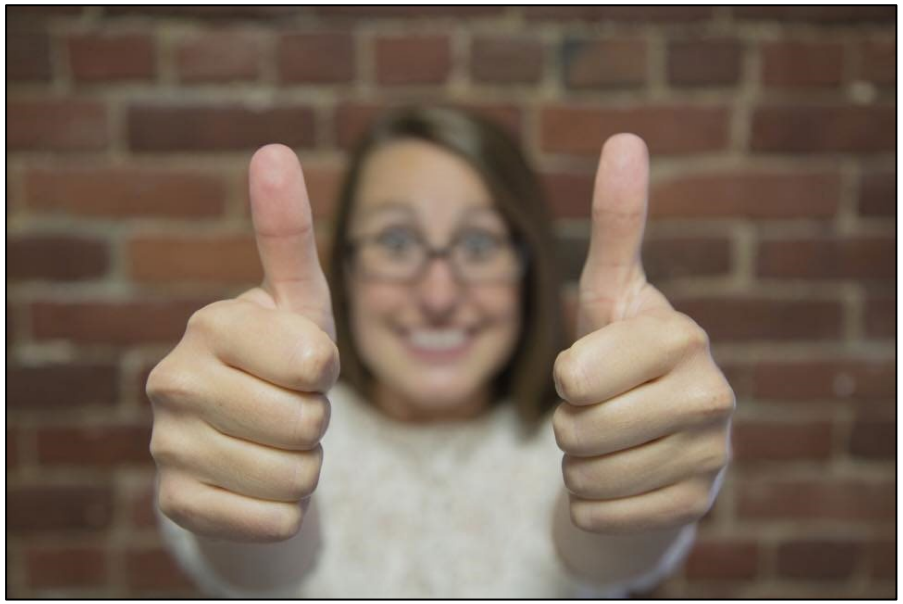
- **Kin-** (golden) **-tsugi** (joinery)
- …or alternatively kintsukuroi (golden repair)
- Japanese art: Damaged ceramics are repaired with lacquer mixed with gold powder or other metals & imperfections are highlighted
- Metaphor for resilience & growth mindset

Image source: https://www.rootsimple.com/2014/05/kintsugi-creating-art-out-of-loss/

Acknowledgements

- Presenters: Carly Valente, Carolyn Jones & Dr Louise McCuaig
- ACHPER staff: Bronwyn Marshall, Amy McCabe & Katy Fox
- ASN Events

Thank you



Thank you for joining us online today!

We hope this professional learning opportunity was beneficial for you.

Feedback

- ACHPER Queensland welcomes and values your feedback

ACHPER Queensland

- ACHPER Queensland have a great calendar of events lined up for 2022
- We encourage you to join ACHPER Queensland to gain member benefits
- Visit: https://www.achperqld.org.au/

Contact details

Dr Hugh Shannon
Senior Lecturer – Queensland University of Technology

Email	h.shannon@qut.edu.au
Phone	+61 7 3138 3577
	@Hugh_Shannon
	au.linkedin.com/pub/hugh-shannon/65/a61/791/