

Comment Discovery Tool

Implications for pedagogy



Conversational Framework

- The **conversation** is the unit of analysis; it is the vehicle for teacher/ learner/ peer communication of concepts.
- “...learning involves a **dialogue** between teacher and student, which reveals conceptions and variations between them” Laurillard, 2002.
- Metadata can be added in line with the material affordances/ design of the learning environment in order to typify/ quantify conversations.
 - Comments can **only** be **initial posts (IP)**, **first replies (FP)** or **further replies (FurR)**
 - This is the total number of possible combinations:

	Initial Post (IP)	First Reply (FR)	Further Reply (FurR)	Initiator First Reply (IR)	Initiator Further Reply (IFurR)
1	✓	✓	✓	✓	✓
2	✓	✓	✓	✓	
3	✓	✓	✓		
4	✓	✓			
5	✓	✓		✓	
6	✓	✓		✓	✓
7a	✓			✓	
7b	✓			✓	✓
7c	✓				

Conversational Heuristics

- A heuristic of these types are:
 - “**Lone**” – only the initiator is involved (7a, b, c) *
 - “**QA**” – there is a single reply from each person in the conversation (4)*
 - “**Limited Social**” – **only** the initiator makes a first reply (5)*
 - “**Extended Social**” – **either** the initiator **or** another person makes a **further** reply (someone is extending the initial interaction...) (1, 2, 3, 6)*

*(Numbers reference the previous slide)

Unique Participants

It is important to see how many unique participants are involved in a conversation, as this is representative of diversity in a conversation

- “Lone” = 1 person
- “Watercooler conversation” = 2 people
- “Small group/ Cocktail party” = 3-9 people
- “Large group/ Conference” = 10+ people

Examples

2 people are involved in a conversation, and it is a simple post and reply = Watercooler/ QA.

4 people are involved in a conversation, and it is a simple post, but with 3 others giving a single reply = Cocktail party/ QA

2 people are involved in a conversation and each person takes many turns in furthering the conversation = Watercooler/
Extended Social

4 people are involved in a conversation and each person takes many turns = Cocktail party/ Extended social

Design Based Research

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- “set of analytical techniques that ... attempts to bridge theory and practice in education. A blend of empirical educational research with the **theory-driven design of learning environments**, DBR is an important methodology for understanding how, when, and why educational innovations work in practice; DBR methods aim to uncover the **relationships between educational theory, designed artefact, and practice.**”

<https://www.learning-theories.com/design-based-research-methods.html>

Comment Discovery Tool

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- The comment discovery tool visualises all the learner comments down to the unit of the ‘word’.

<https://www.futurelearn.com/courses/humphry-davy/1/steps/257433>

Research Questions


- What impact does the CDT have on conversations?
 1. Do conversations involve more people? (cocktail parties as opposed to watercooler conversations)
 2. Are conversations more 'social'? – (more extended social types)

Initial results

William Wordsworth (run 2 and 3)

- RQ1: Do conversations involve more people?

Conv. Type	Run 2 (NO CDT)	Run 3 (CDT)
Lone (1)	76.65% (4603/6005)	69.00% (3112/4510)
Watercooler (2)	16.18% (972/6005)	17.20% (776/4510)
Cocktail party (3-9)	7.16% (430/6005)	13.54% (611/4510)
Conference (10+)	-	0.02% (1/4510)





- Largest differences in ‘Small group/ Cocktail party’ sized conversations (increase) and Lone posts (decrease)
- This indicates that CDT has a positive effect on the ‘diversity’ of conversations

Initial results

William Wordsworth (run 2 and 3)

- RQ2: Are conversations more ‘social’?

Conv. Type	Run 2 (NO CDT)	Run 3 (CDT)
Lone	76.65% (4603/6005)	69.00% (3112/4510)
QA	15.89% (954/6005)	19.65% (886/4510) 
Limited Social	3.78% (227/6005)	4.83% (218/4510)
Extended Social	3.68% (221/6005)	6.29% (284/4510) 

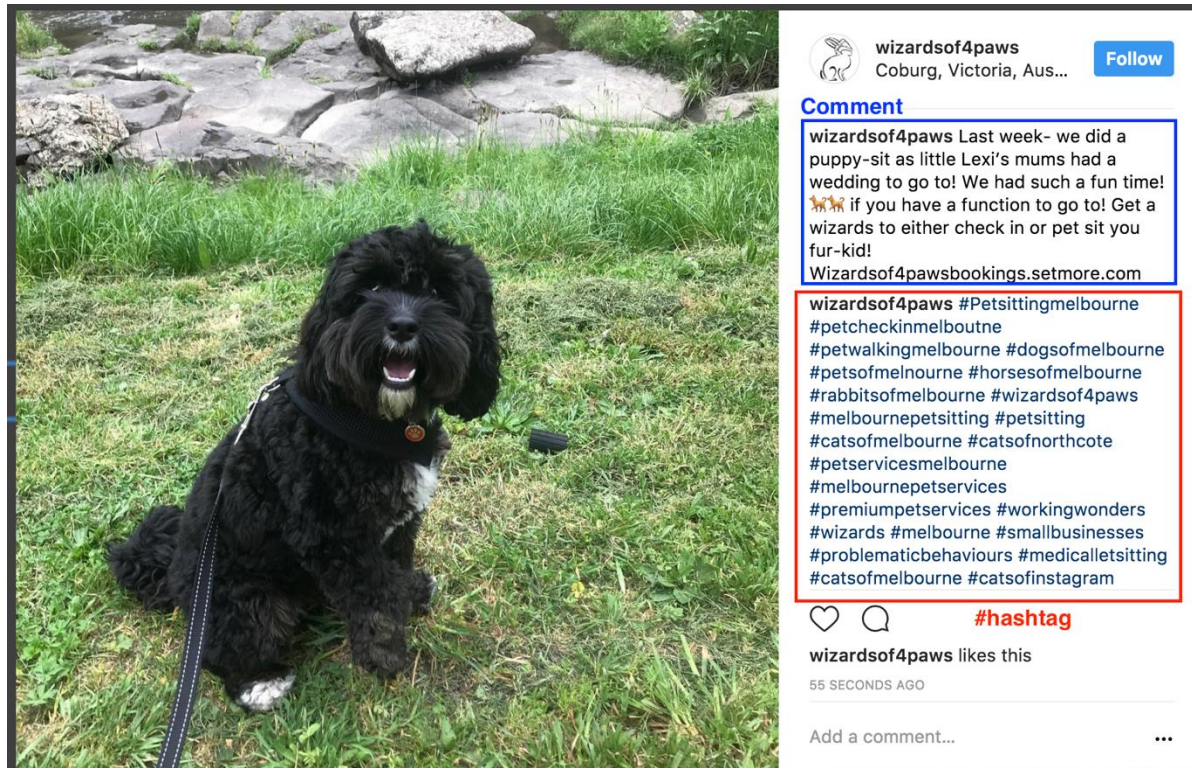
- Largest differences in QA and Extended Social (increase) and Lone (decrease)
- All initial posts start as ‘Lone’ and grow into ‘extended social’ so initial results indicate that CDT has positive effect on social dimensions

Implications for pedagogy

- CDT ‘works’ in that conversations have increases in all the right places (fewer lone, more social, more unique participants)
- Optimisation
 - Encourage learners to ‘hashtag’ their comments, and create a visualisation based only on hashtags – allows a ‘theme-able’ word cloud.
 - Learners can take an active role in the learning process rather than passive consumers
 - “**signposts not fenceposts**” approach to discussion tasks and platform design (“stigmergic” learning)
 - And finally....

“Insta-gogy”

- ‘insta-gogy’: learners are active participants in the learning experience which enriches the experience for everyone.



Any questions?

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