MEDINFO23

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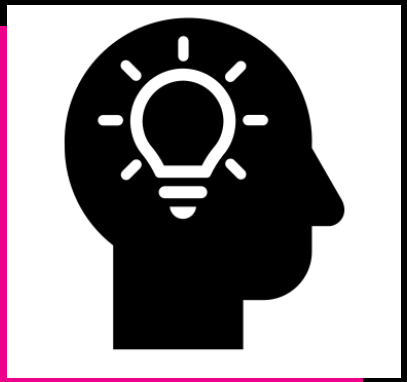

Using Google Analytics with Health Information-Seeking Model to Evaluate the Design of Health Information Websites

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Today's Menu...

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- Research Design
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Background and Rationale

- Health information websites are common
  - How to evaluate their effectiveness?
  - There is a need for using website usage data to inform continuous improvement
- Google Analytics (GA) is a widely used web analytical tool
  - Free and powerful
  - It has a large market share
- *How to use GA scientifically for designing health websites?*

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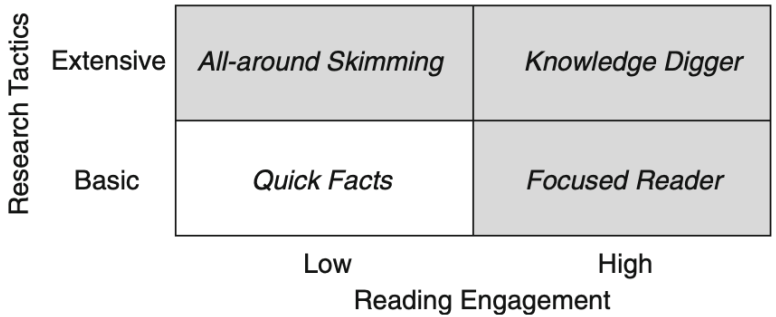
Theoretical Model

- Health information-seeking model proposed by Pang et al. (2015)
- Classified health information-seeking to 4 types, based on research extensiveness and reading engagement:



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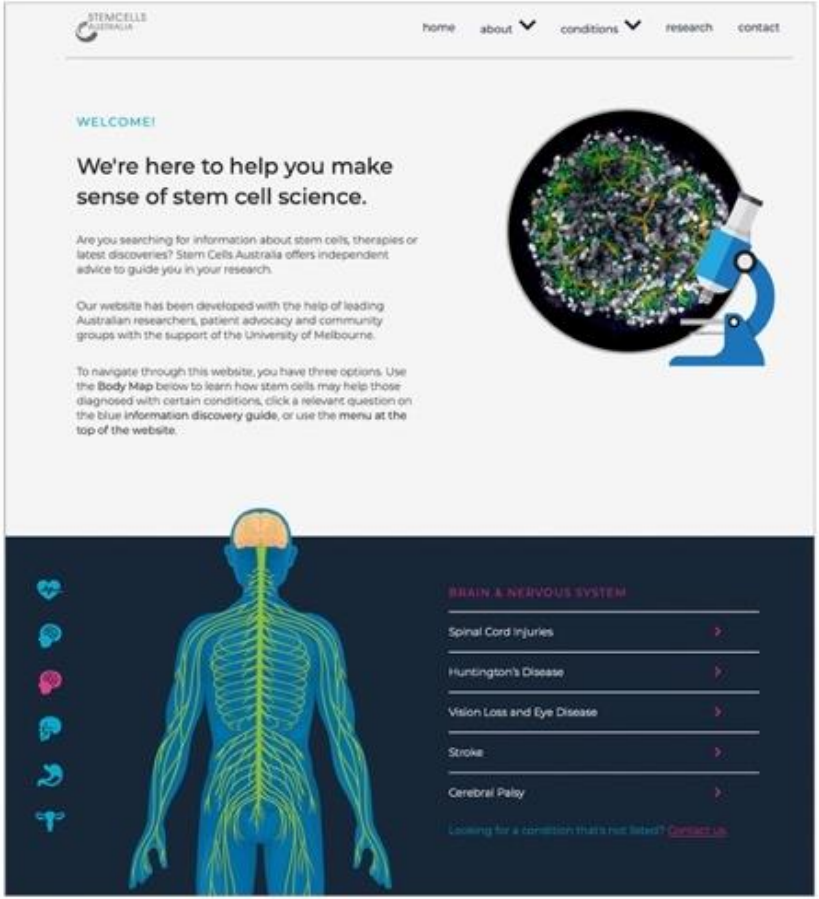
Research Design

- Subject: Stem Cells Australia - https://stemcellsaustralia.edu.au
  - Educational website providing evidence-based stem cells information and research updates
- It had a major design update in January 2021
  - Goal: To improve information usefulness and user engagement
  - That is, move audience to upper-right corner in the model
- Mapped metrics to model based on device and traffic types

Original Version (OV)



New Version (NV)

Results

- Total amount of users and sessions:
  - Original Version: 7970 unique users with 8525 sessions
  - New Version: 3095 users with 3267 sessions
- Quality of visits improved
- Refer to the paper for detailed figures

	Direct Traffic	Referral Traffic	Organic Traffic	Desktop and Tablet Traffic	Mobile Traffic
Original Version					
Users	1438	334	6198	5263	2668
Sessions	1562	347	6616	5690	2835
Pages/Session	2.33	1.52	1.97	2.24	1.63
	(SD=1.281)	(SD=1.301)	(SD=0.467)	(SD=0.725)	(SD=0.264)
Session Duration (sec.)	108.73	64.33	82.01	100.91	53.19
	(SD=114.456)	(SD=90.981)	(SD=37.290)	(SD=52.249)	(SD=37.145)
New Version					
Users	1241	259	1595	1959	1126
Sessions	1307	279	1681	2100	1168
Pages/Session	4.56	3.26	4.46	5.01 (SD=1.763)	3.39
	(SD=2.524)	(SD=1.810)	(SD=1.540)		(SD=1.151)
Session Duration (sec.)	86.83	124.26	98.04	113.26	60.60
	(SD=70.575)	(SD=245.153)	(SD=66.391)	(SD=71.590)	(SD=62.480)

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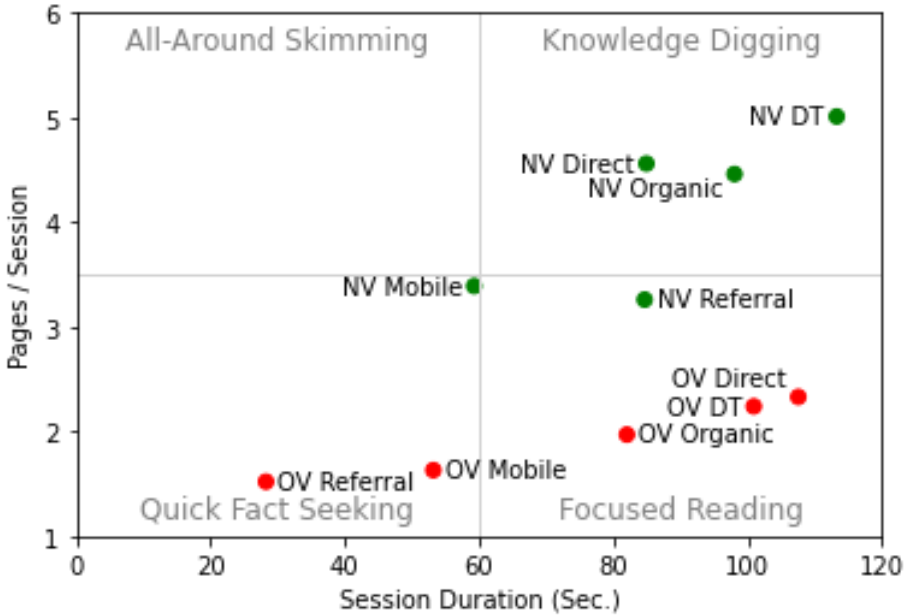
Results and Discussion

- DT traffic dominated before, mobile users increased after the redesign
- Organic and referral traffic showed more engagement
- DT users: more research
  Mobile users: quick reading
- NV users moved towards "research" quadrant (good usage pattern)



Abbreviations:
OV = Original Version, NV = New Version,
DT = Desktop and Tablet

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Conclusions

- Mapping GA data to a theoretical model helps to determine what website administrators should look for
- Quadrant viusalisations helps to identify changes and improvements
- Illustrates different user profiles from various web traffic and devices
- Helps to inform design directions
- Free and no additional software is needed; easy to implement

Thank you very much!

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