Knowledge discovery using Citation Connections: Innovative research tool

Chief Investigators

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Background

Electronic theses and dissertations (ETDs) are a valuable resource for scholars worldwide. ETDs and digital libraries offer the potential to radically change the nature and scope of the way in which doctoral research results are presented, disseminated and used.
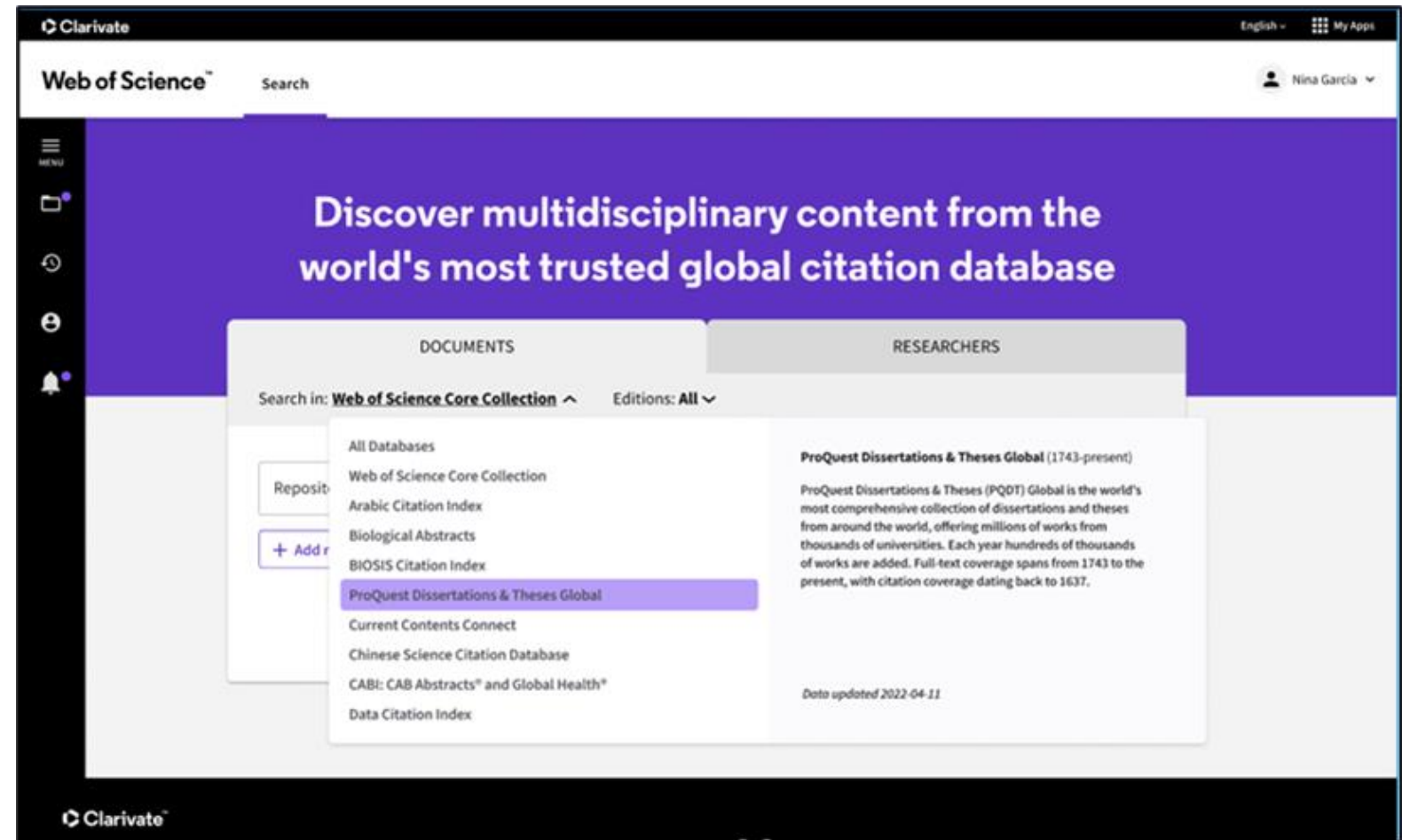
Why ProQuest (PQDT)?

Beyond an aggregated international collection, PQDT Global is a set of tools that provide researchers insights into a connected network of research. Most of the world's top 400 universities partner with Clarivate to advance their research
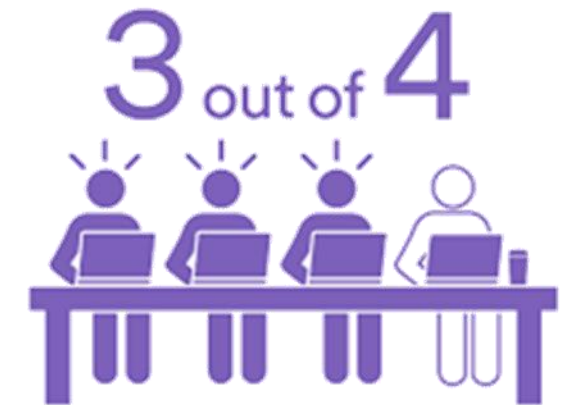
Citation connect: Innovative research tool

Plug the dissertations and theses into a network of 196 million journal articles, conference papers, books, preprints, data sets, and patents connected by 2.2 billion citations

1. Graduate research citations are linked to published content from 1864- present

2. Establish Author Accounts to claim the thesis and begin building recognition and citation records

Web of Science users consider dissertations and theses important for understanding the background of their research topic.

ProQuest Dissertations & Theses Global-learning & Research tool: Citation Connections

Citation connections

Dynamic algorithmes surface relevant, credible sources

Beyond an aggregated international collection, PQDT Global is a set of tools that provide researchers insights into a connected network of research.

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Research question

To what extent does the Citation Connections discovery feature demonstrate its efficacy?

The objectives were twofold

1. to acquaint the participants with the features and functionality of the Citation Connections discovery tool

2. to ascertain the advantages and facilitating elements associated with this innovative tool, 'citation connection' by

   i. examining its impact on the research process

   ii. enhancement of citation quality, and

   iii. streamlining of information retrieval procedures

Additionally, we aimed to gain insight into user experiences, encompassing evaluations of user satisfaction, identification of challenges encountered during tool usage, and solicitation of feedback for potential enhancements aimed at improving usability.

Method

An exploratory study was undertaken to estimate the efficiency of Citation Connections. The sample size calculation used was $Z^2 \times (1-p)/m^2$

Key: where, p = probability score

Z = 1.28 with 80% confidential interval and

standard marginal error of 0.05

The estimated sample size was 164, adding 15% (considering dropout) the arrived sample size was 189 and this included

110 research scholars

65 supervisor and

14 librarians from a leading university in India
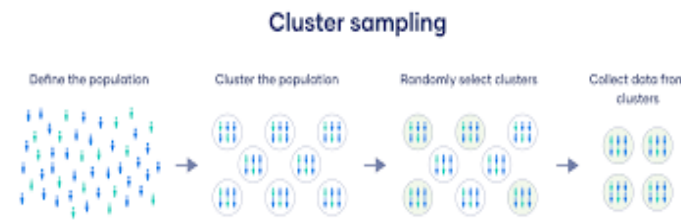
Participants

Cluster sampling technique was employed to recruit participants from the affiliated three institutions within the university. We focused on institutions that appear to be vanguard in subject specific ETD development, as manifested in ETD output and statutory submission requirements. The logic in this approach is to obtain relevant national wide perspectives and we will focus on institutions across the nation.

The targeted specific institution from the was based:

1) Having a graduate program (Masters and/or PhD)

2) Requiring graduate students to submit their theses

    or dissertations in an electronic format

3) English speaking and

4) Appearing to be in the vanguard of ETD developments in subjects as judged by

    relevant databases
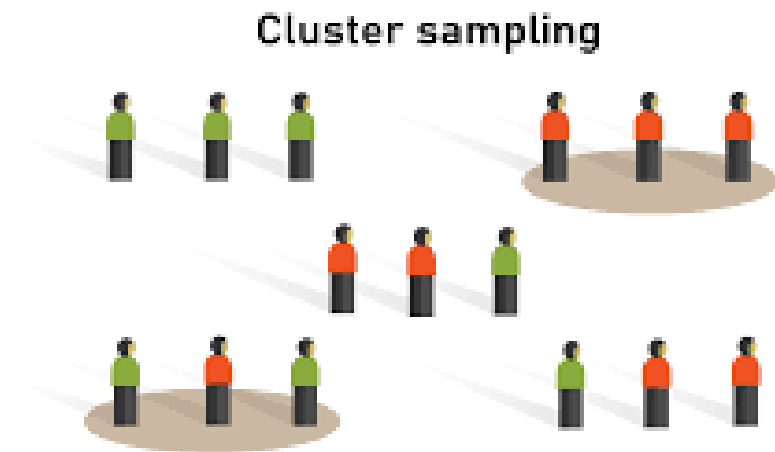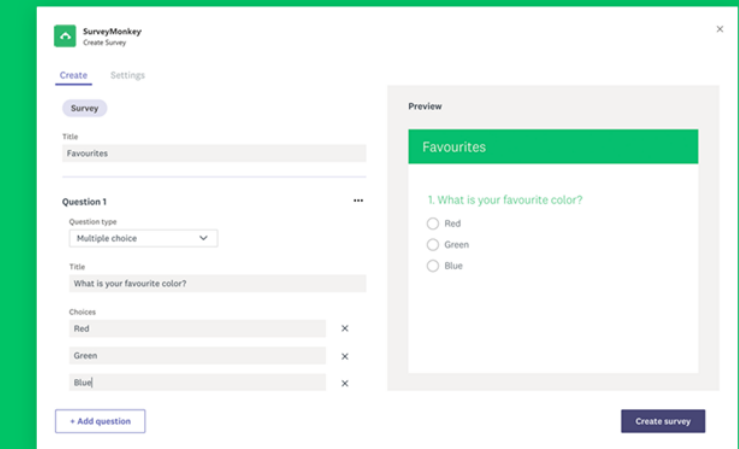
Data collection procedure

Consistency across study sites was maintained by using one standardized recruitment approach (email invitation) and one online data collection site (SurveyMonkey). After the identifying institutions,

The specific Deans or Directors were contacted by either email or phone as needed. Communication included an explanation of the study, protection of human subjects', and the link to the data collection site.

We, also requested their support in data collection to forward our email to their faculty, research scholars and librarian from their higher degree by research program, for participation in the study.

Email reminders were resent on the study announcement biweekly for three months.

Instrument Used for Data Collection

The survey was based on the literature and experiences of the researchers. The research team examined and redefined terminology as needed to account for differing usages across the country. Pilot was conducted on the post-graduate nursing students to examine the ETD Survey for ease of use, time to complete, format and clarity of questions.

The final version of the survey consisted of two parts. Part I included 11 questions pertaining to participant characteristics, including age, role/position, country of origin, and year of graduation from a graduate program. Part II of the survey included 15 questions regarding participants' knowledge and use of Citation Connect. The survey was administered online via SurveyMonkey and took approximately 10-15 minutes to complete

Results: Significant contribution of Citation Connections

Demography (N)	%	Contribution of Citation Connections				
		High	Mod.	Min.	X2	P value
Gender						
Male	84	44.5	83	1	0	0.025	0.874 NS
Female	105	55.5	104	1	0		
Involved in Research as						
Scholars	110	58.2	1	0	0	2.320	0.509 NS
Supervisor	65	34.3	1	0	0		
Librarian	14	7.5	0	0	0		
Research Experience						
0-5years	12	6.3	12	0	0	2.320	0.509 NS
5-10years	58	30.7	58	0	0		
10-15years	89	47.1	86	2	0		
>15 years	30	15.9	13	0	0		

The significance of Citation Connections

Demography (N)	%	Contribution of Citation Connections				
		High	Mod.	Mini.	X2	P value
Used ETD specific search engine before						
Yes	63	33.3	61	1	0	0.271	0.603 NS
No	126	66.7	126	1	0		
Previous training for ETD and others						
Attended a session By ProQuest	24	12.7	23	0	0	46.421	0.000 **S**
During PG research	02	1.0	1	1	0		
During PhD research	18	9.5	19	0	0		
While working	6	3.3	6	0	0		
No training	139	73.5	138	1	0		

Acuity on citation Connections

Experience of respondents using Citation Connections

Very easy application on filtration of topics, foundational and similar study for reference are fascinating! Content segregation and citation on one screen are excellent.

Easy to find out what we need…and download as PDF save option with the login id and password for individuals for future reference.

We can use reference according to our preference we need…changing reference style.

In citation they separated language, University option.

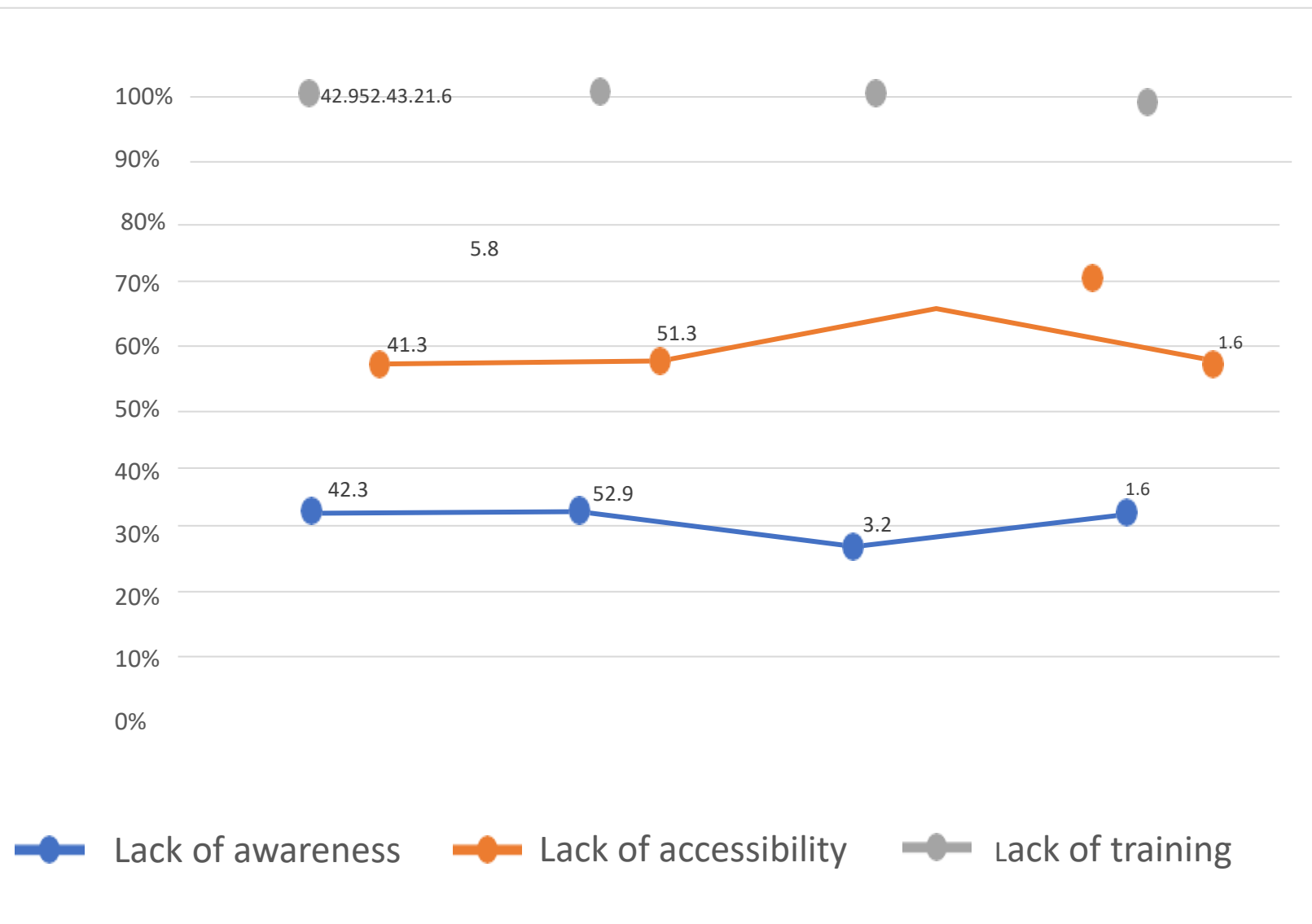*Visualize International university research- International university research*

No lag, good to use, useful for study

Love the way it works! Yes, we want to use more of Citation Connections.

Overall: Interlinking of citations, Easily accessible and Easy to search

Felt Challenges using Respondent rating

Legend: Lack of awareness — Lack of accessibility — Lack of training

Data labels on chart: 42.9 52.4 3.2 1.6 (Lack of training, 100%); 5.8; 41.3; 51.3; 1.6; 42.3; 52.9; 3.2; 1.6

Any difficulty experienced using citation Connections

o   *No-no-no.. Nothing... Nil*

Additional features you like to see

o *Interconnection with PubMed*

o *Multi-colored icon will be attractive*

o *Total Number of foundational research*

o *Totality of similar dissertation... can be mentioned upfront*

Research outcome: Citation Connections were discovered to provide numerous benefits for researchers!

o   Visibility to foundational research and the ability to gather similar dissertations
o   Enables electronic assessment of theses and dissertations
o   Facilitates easy to utilization of computer technology in literature searches
o   Motivates users to acquire valuable literature review skills
o   Provides an opportunity to gain proficiency in electronic publication
o   Reduces the need for physical library space, storage, and pilling expenses

There are unique components for the user to explore such as Full text PDF, Preview PDF and Abstract. A fascinating feature of 3 doted options in select panel enables discovery tips to demystify dissertations. Options like "modified search, recent search, save search and alert" were found to be noteworthy

The gap in literature was also well addressed, such that if a related document is not available on the topic, that topic was considered unique.

View of Citation Connections, a discovery tool by **ProQuest**

Recommendation and summary

To our knowledge, this is the first its kind research study introducing 'Citation Connect'

The majority of research scholars gained a better understanding of how to access ETD digital libraries and acquired working knowledge to use Citation Connect to its fullest potential.

The information gained in this study will be used to develop further research and educational developmental work

Any technical and conceptual concerns in this area that required further explanation were pointed out

A long-term educational goal was to obtain the information necessary to develop an online educational intervention to promote the use of Citation Connect

Thank You

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