

# Gadgets and Gizmos A- Plenty: Exploring Technology for Nursing Research

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Distinguished Educator



Sarah Manacek is the Director of Simulation Education and a Clinical Assistant Professor at the University of Vermont.

Her clinical background is in acute care and specialty surgery.

Sarah is an Apple Distinguished Educator and Apple Teacher.

Her research and scholarship center on nursing education, technology, and simulation.

**Sarah Manacek DET, MSN, RN**

# Objectives

- Conceptualize how technology can assist with various steps of the research process.
- Explore how software and devices are transforming research and evidence-based practice.
- Envision how emerging technologies may influence the future of nursing research.

# Agenda

Technology for...

- Bibliography
- Literature Review
- Data Collection
- Envision the Future
- Data Analysis
- Dissemination

How can technology assist  
with the research process?



# How can technology assist with the research process?



:Padlet



Sarah Manacek (she/her) • 1m



How can technology assist with the research process? >



AA

padlet.com



# Bibliography

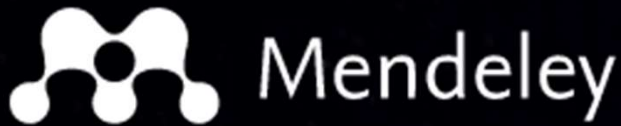
# Bibliography



Zotero



Citavi





# Literature Review

# Literature Review



Read by QxMD



Figure 1



Researcher



EBSCO Mobile

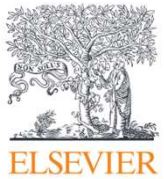


Libby by OverDrive



PubMed Hub

# Literature Review



Scopus®

Your brilliance, connected

- CiteScore
  - Journal percentile rank
  - Citation score
  - Abstract views
  - Presence in bibliographic software
  - Likes on social media

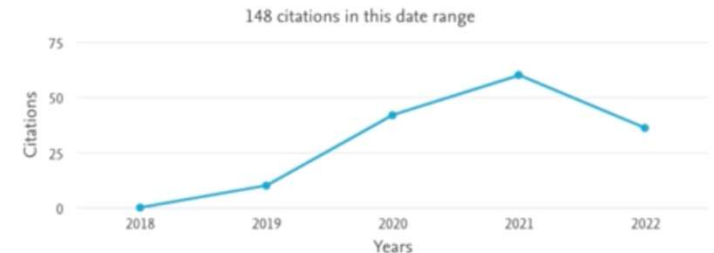
## Scopus Metrics

148 Citations

Total number of times this document has been cited in Scopus.

Date range: 2018 to 2022 Update

- Include all citations
- Exclude self citations
- Exclude citations from books



### Citation benchmarking

Shows how citations received by this document compare with the average for similar documents.

99th percentile

### Field-Weighted Citation Impact

Shows how well this document is cited when compared to similar documents. A value greater than 1.00 means the document is more cited than expected.

9.79

## PlumX Metrics

### Citations

CrossRef - Citation Indexes:	13
Policy Citation - Policy Citations:	15

### Usage

Digital Commons - Abstract Views:	1
EBSCO - Abstract Views:	257
EBSCO - Link-outs:	45

### Captures

EBSCO - Exports-Saves:	54
Mendeley - Readers:	1135
Mendeley - Readers:	12
Mendeley - Readers:	8
Mendeley - Readers:	4
Mendeley - Readers:	...

### Mentions

Blogs:	3
News:	1

### Social Media

Facebook - Shares, Likes & Comments:	268
Twitter - Tweets:	116

# Literature Review



**iOS Notes**



**OneNote**



**Notability**



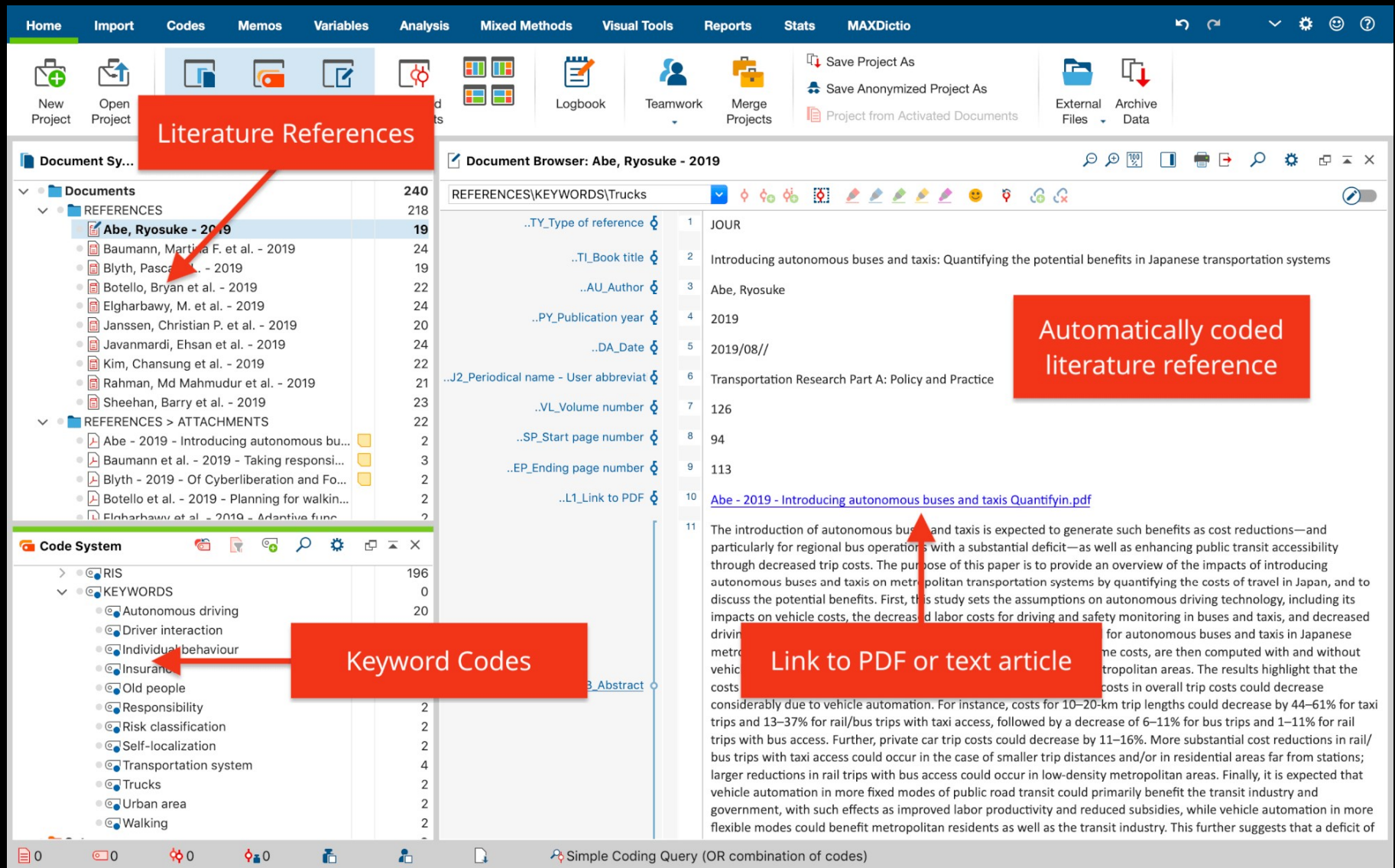
# Literature Review

LiquidText





# Literature Review



The screenshot displays the MAXQDA software interface with several key components:

- Document Browser:** Shows a list of documents under 'REFERENCES'. A red box labeled 'Literature References' points to the 'Abe, Ryoosuke - 2019' entry.
- Code System:** Shows a list of keywords under 'KEYWORDS'. A red box labeled 'Keyword Codes' points to the 'Trucks' keyword.
- Document Viewer:** Displays the content of the selected document, 'REFERENCES\KEYWORDS\Trucks'. A red box labeled 'Automatically coded literature reference' points to the first line of the document, which is a structured reference entry. A second red box labeled 'Link to PDF or text article' points to the 'Link to PDF' field in the same entry.

**Literature References**

**Keyword Codes**

**Automatically coded literature reference**

**Link to PDF or text article**

# Literature Review

Interactive Word Tree

the 37 (645) Branches

the

- focus
  - group
    - method
      - , but a number of studies suggest that the defining feature of the method is virtually abs of inquiry improved the objectivity of each session, reduced the influence of a sensitive t was implemented in practice, thereby pointing to the limitations as well as the strengths as a tool to study violence in youth residential care based on an empirical study of can indeed address and solve these challenges. This also entails creating appropriate cor in a research study involving small business and entrepreneurship. The project concerne on the successes and failures of the project is discussed. <http://qrj.sagepub.com/cgi/con>
      - We question the habit of making assumptions about the 'proper' use of participant interaction and call First, it outlines the study. Second, it discusses the conditions under which the focus group method was This article analyses how the required data are interactionally produced to be visible for the people bet method of data collection in nursing research. Five discussion/reflection meetings were carried ou research method. In addition, we analyze the design and implementation of focus groups, includin Farnsworth, John Boon, Bronwyn 2010/10/01 10.1177/1468794110375223 605 624 Qualitative Research Qualit: literature suggests that absence of interaction data reflects a philosophical position, rather than neglect. Particip is a research methodology in which a small group of participants gathers to discuss a specified issue in light of current research into interaction in problem-based learning (PBL) tutorial groups would facilitate the d has been described as a potentially liminal space, which enables the discussion of taboo subjects by breaking , to facilitate women's learning from each other's experience. <http://ijq.sagepub.com/cgi/content/abstract/4/4/t> interviews. <http://qrj.sagepub.com/cgi/content/abstract/8/1/73> JOUR Contrasting Internet and Face-to-Face Foc interaction to generate visible data for the overhearing audience, the video and the report. The article ends and discuss sexuality 'seriously' yet also preserve masculine identity, young men deploy discursive constructions and discuss the pros and cons and ways of improving this procedure. <http://ijq.sagepub.com/cgi/content/abstract>
      - as a
        - involved imaginative and creative interactions with data. Particular innovations in the blending of narrative and th
        - a new qualitative framework for collecting and analyzing focus group data. First, they identify types of data
    - groups
      - provide
        - an overview of the situation of women in rural China as a backdrop for the photonovella process
        - share their experience conducting online, asynchronous focus groups using a Facebook platform. We reflect upon the process o conducted focus group interviews with women due to be screened in a national breast cancer screening program. Their examined Internet-mediated qualitative data collection methods among a sample of children with chronic health conditions. Sp experimented with roving focus groups in the rural landscape of Michigan (USA). As they moved along in a demonstrate the technology used to record the focus groups and discuss the pros and cons and ways of suggest that team research offers an important avenue for both extending qualitative methods and expanding interpretative ler draw upon their study of the settlement and migration patterns of East African Shia Ismaili Muslims in Vancouver, explicitly locate contradictions, ambiguities, and paradoxes within the narratives of first- and second-generation Ismailis. <http://> offer three propositions to strengthen the moral geographical space between researchers and participants: (a) prior to data coll report on a collaborative project that tested the potential of online discussion boards for use in virtual focus focus their analysis in this article on online focus groups (FGs), in an attempt to describe how the describe, reflect on and critique their chosen research approach, discussing the value, utility and pitfalls associated with using
  - authors
    - provide
      - an overview of the situation of women in rural China as a backdrop for the photonovella process
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3

Despite the abundance of published material on conducting focus groups, scant specific information exists on how to analyze focus group data in social science research. Thus, the authors provide a new qualitative framework for collecting and analyzing focus group data. First, they identify types of data that can be collected during focus groups. Second, they identify the qualitative data analysis techniques best suited for analyzing these data. Third, they introduce what they term as a micro-interlocutor analysis, wherein meticulous information about which participant responds to each question, the order in which each participant responds, response characteristics, the nonverbal communication used, and the like is collected, analyzed, and interpreted. They conceptualize how conversation analysis offers great potential for analyzing focus group data. They believe that their framework goes far beyond analyzing only the verbal communication of focus group participants, thereby increasing the rigor of focus group analyses in social science research.

<http://ijq.sagepub.com/cgi/content/abstract/8/3/1-a>

JOUR

An Innovative Sequential Focus Group Method for Investigating Diabetes Care Experiences With Indigenous Peoples in Canada

Jacklin, Kristen

Ly, Anh

Calam, Betty

Green, Michael

# Data Collection

How do you, or how can you, use technology to collect data?





# Data Collection

Clinical Trials

Survey

Mobile Ethnography



Cureitt



Qualtrics XM



Indeemo

## Sentiment Analysis



Tweet Sentiment Viz

# Data Collection



**Philips Biosensor**



**Withings Move ECG**



**Omron HeartGuide**

# Digital Health

“The broad scope of digital health includes categories such as mobile health (mHealth), health information technology (IT), wearable devices, Telehealth and telemedicine, and personalized medicine”

*-U.S. Food & Drug Administration*





# Envision the Future

National Institutes of Health



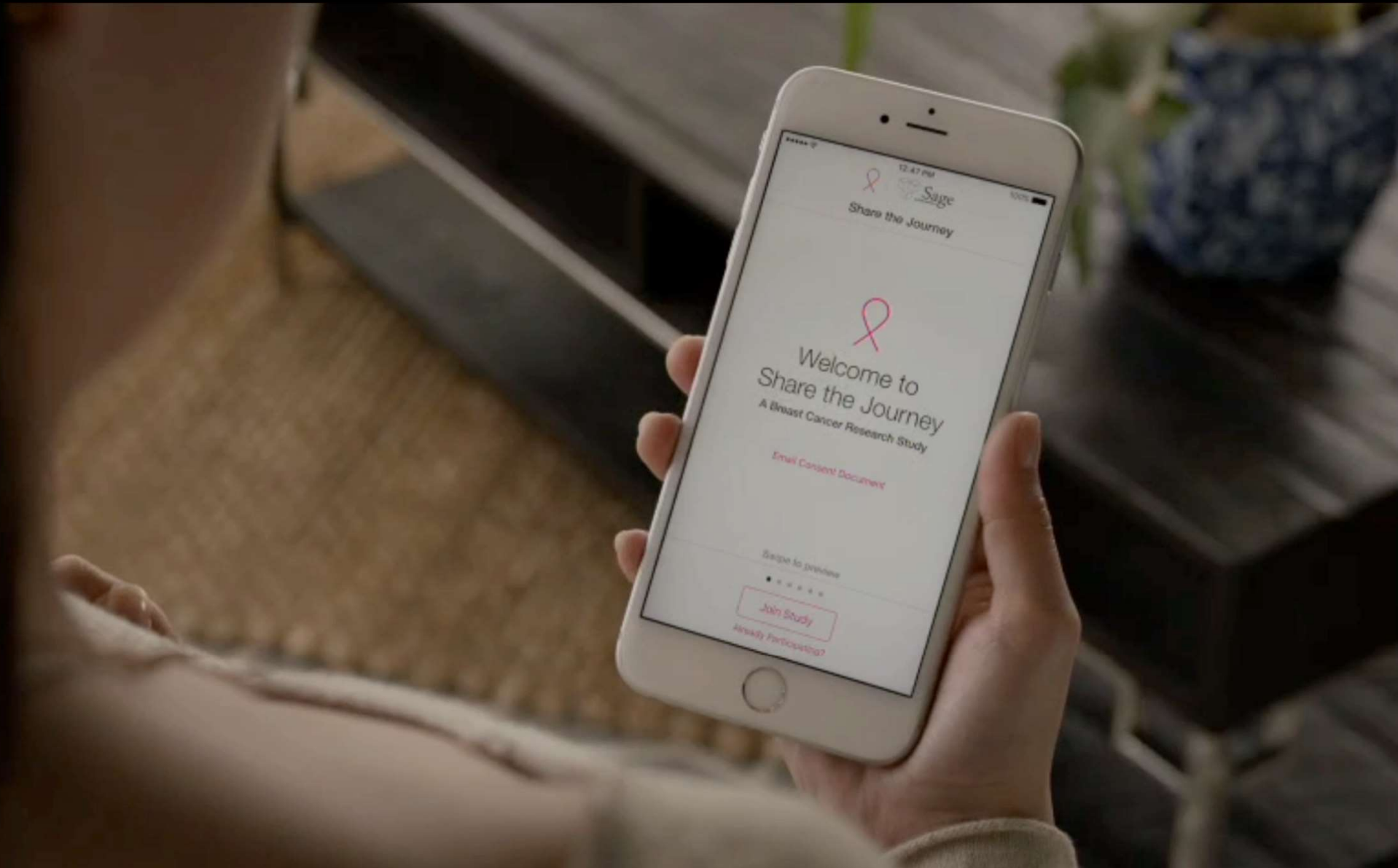
## Reducing Anticoagulant Use

- Northwestern, John Hopkins, AHA, Stanford, Uni California, National Heart, Lung, Blood Institute
- \$37 million grant to trial using Apple Watch
- Reduce anticoagulant use among those with atrial fibrillation
- 7-year study, recruiting 5,400 participants

## All of Us Research Program

- Scripps Research
- 10,000 FitBits to learn how participants engage with wearables
- Physical activity, heart rate, sleep patterns
- Personalize healthcare
- Early detection of disease

# Envision the Future



(Apple, 2019)

# Envision the Future

How will digital health impact the future of nursing research?



# Envision the Future

## Research App Frameworks

### Care Kit iOS



CareKit

An open source framework for developing apps, CareKit helps users better understand and manage their health by creating dynamic care plans, tracking symptoms, connecting to care teams, and more.

### Research Kit iOS



ResearchKit

A software framework for apps that let medical researchers gather robust and meaningful data.

### Research Stack



ResearchStack



# Envision the Future



Claris Filemaker Pro



# Data Analysis



Qualtrics XM

IBM SPSS software



Dissemination

# Dissemination

The image shows a screenshot of a web browser displaying a document in a SharePoint environment. The browser's address bar shows the URL: [https://m365x869113-my.sharepoint.com/:w:/r/personal/meganb\\_m365x869113\\_onmicrosoft\\_com/\\_layouts/15/Doc.aspx?sourcedoc=%7B7B3E309CBE-1B43-437C-9201-8775C3B5102...](https://m365x869113-my.sharepoint.com/:w:/r/personal/meganb_m365x869113_onmicrosoft_com/_layouts/15/Doc.aspx?sourcedoc=%7B7B3E309CBE-1B43-437C-9201-8775C3B5102...)

The document viewer interface includes a left-hand navigation pane with the following options: Close, Home, New, Open, Info, Save as, **Export**, Print, Share, and About. The 'Export' option is currently selected.

The main content area displays the 'Export' menu with two options:

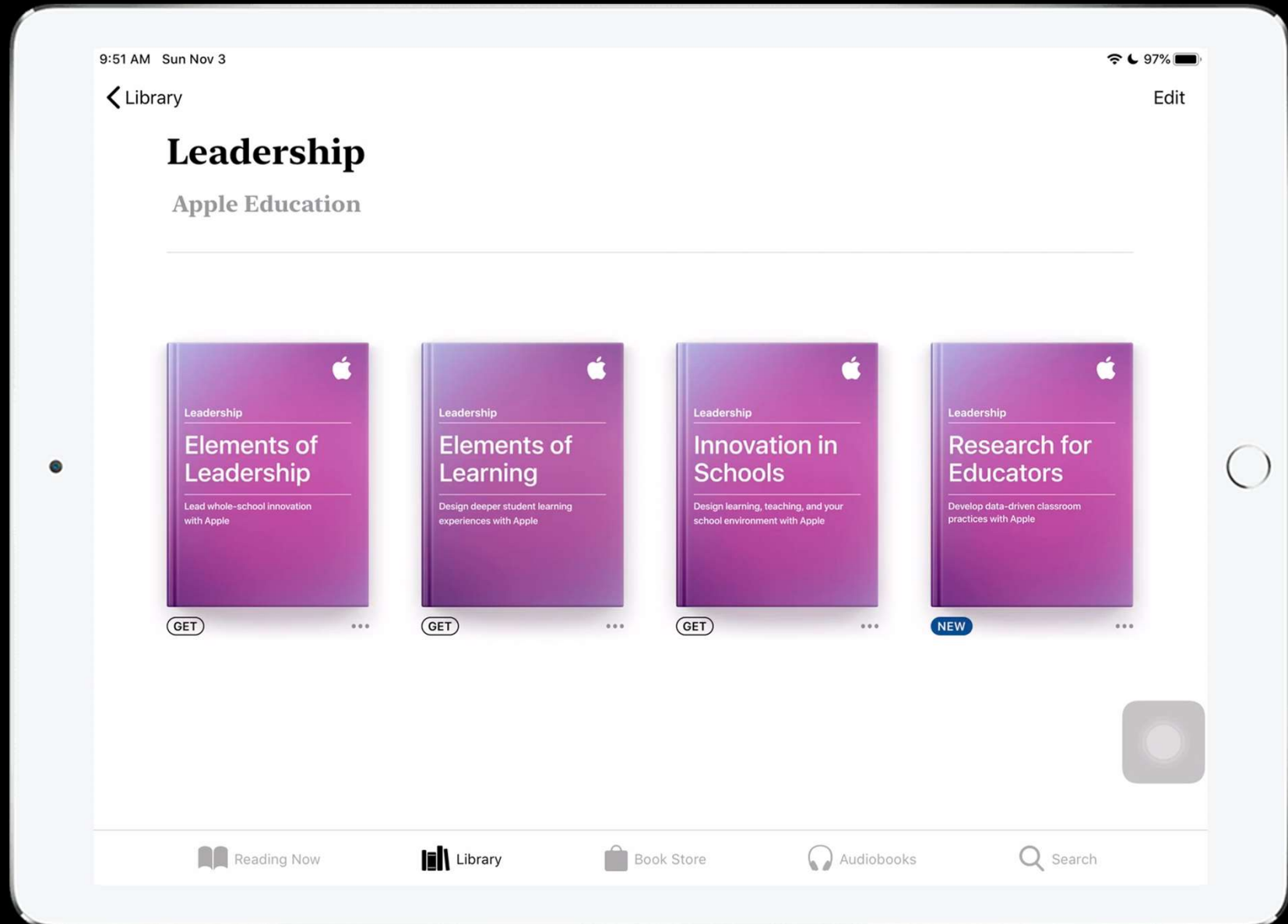
- Transform to Web Page**: Transform your document into an interactive, easy-to-share web page that looks great on any device.
- Export to PowerPoint presentation (preview)**: Export your document into a multi-slide presentation with a design theme. This option is circled in red, and a mouse cursor is pointing at it.

The document content is partially visible, showing the title 'Contoso Sales Proposal' and several paragraphs of text. The text includes phrases like 'experiencing unprecedented change—and with that', 'ware and Contoso are ideally poised to take a market', 'ency, and innovation to their customers.', 'in hand. They are always on and always connected, so', 'power, more speed, more seamless integration. The', 'your customers, anticipate their future requirements, and', 'ces sense. No one in the consumer electronics market has', 'g history of exciting innovation, turbulent disruption, and', 'consistently navigates through these changes and', and 'th, what makes Contoso different? Four key points.'



# Dissemination

## ePub Using Pages



# Dissemination

 iTunes Connect

SALES

Units

Proceeds

Pre-Orders

SAVED 

Sales and Trends  
Reports

Payments and  
Financial Reports

Add Filters 

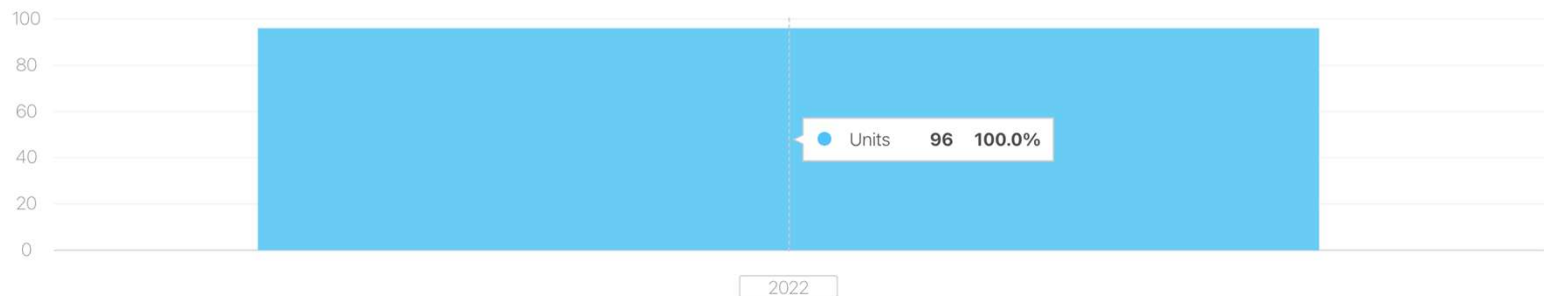
96 Units  13%





<  Jan 1 - Dec 31, 2022

Content **Territory** Genre Transaction Type Branding Company Publisher Author

Units per Year

Bar  Years  



	Name	Content Type	Apple ID	Units	Previous Range	
1	 Innovations in the Simulation Lab Sarah Manacek, Lorraine Pitcher	Book	1493866410	88	76	 16%
2	 Studying Angles for Health Promotion Sarah Manacek, João Vieira	Book	1493291046	8	9	 11%

# Thank you!!



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