

# Research to practice: How it can happen and why it really matters

By Carol A. Gordon

## Snapshot

Dr Carol Gordon reflects on her valued colleague, Dr Ross Todd, and his impact on our profession. She champions his belief in the crucial link between research and practice in school librarianship and the ongoing relevance of his evidence-based practice trilogy: evidence FOR practice, evidence IN practice, and evidence OF practice. Dr Gordon, in this article, charts the progression and development of Dr Ross Todd's ideas across his various projects.

On a balmy spring day in Osijek, Croatia the international biennial conference, Libraries in the Digital Age, focused on the theme, 'Information Everywhere' which addressed the changing and challenging environment for libraries and information systems and services in the digital world. Researchers, educators, students, practitioners, and developers gathered from all corners of the world to participate in a forum comprised of personal exchanges, discussions, and learning. It was a bitter-sweet event, underscored by the library profession's loss of Dr. Ross Todd. Ross' volume of research identified a pivotal concept in the school library profession: The importance of the evidence-based practice trilogy: evidence FOR practice, evidence IN practice, and evidence OF practice. (Figure 1)

**...evidence FOR practice, evidence IN practice, and evidence OF practice.**


 <p><b>“Knowledge space not information place</b></p> <p><b>“Connections, not collections.”</b></p> <p><b>“Actions, not positions.”</b></p> <p><b>“Evidence, not advocacy.”</b></p>	<p><b>Evidence FOR Practice</b></p>	<p><b>FOUNDATION INFORMATIONAL</b></p> <p>Existing formal research provides the essential building blocks for professional practice:</p>
	<p><b>Evidence IN Practice</b> Applications / Actions</p>	<p><b>PROCESS TRANSFORMATIONAL</b></p> <p>Locally produced evidence; Data generated by practice is meshed with research-based evidence to provide a dynamic decision-making and learning environment: Librarian's evidence / thinking / wisdom</p>
	<p><b>Evidence OF Practice</b> Results – impacts &amp; outcomes</p>	<p><b>OUTCOMES FORMATIONAL</b></p> <p>user-reported evidence learner changes as result of inputs, interventions, activities, processes</p>

Figure 1. The Evidence-Based Practice Paradigm

Ross' concept of evidence-based practice is a paradigm that posits a critical concept: Practitioners, as well as researchers, can find and use evidence that school libraries help students learn. Ross' paradigm challenged researchers to provide data to support his claim and he challenged practitioners to use formal research, in addition to the evidence that emerges from everyday practice, to improve their practice. At the LIDA conference I was honored to deliver a presentation that explored Ross' work: 'A Reflection on Dr. Ross Todd's Rationale for the Study of School Libraries: Results of his Works and Reasoning for the Relevancy and Resiliency of School Libraries.' (A nod for Ross' penchant for alliteration.). This article excerpts key concepts of

**Practitioners, as well as researchers, can find and use evidence that school libraries help students learn.**

Ross' body of research that strongly documents the synergy between research and practice in school librarianship. In addition, Ross' work establishes synergy as a working principle for improving practice and for developing the relevance and resiliency of school librarianship.

The first data in Ross' journey to build a relationship between research and practice emerged from his doctoral dissertation. He used Brookes' Fundamental Equation to consider the changes of the existing knowledge of five girls when they were exposed to new information about drugs. Fig. 2 shows the fundamental equation that Ross applied to identify the interaction of existing knowledges and their interaction with the increment of information. (Figure 2)

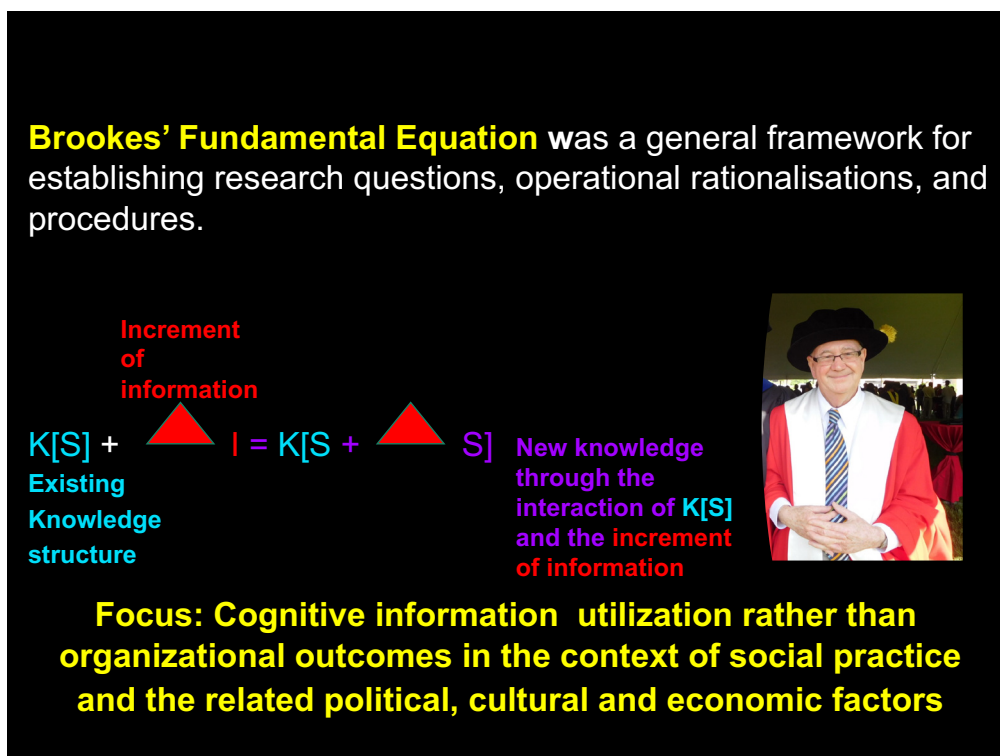


Figure 2. Brooke's Fundamental Equation

Figure 3 shows how the girls' knowledge of drugs changed to include five effects.

## Findings: Five effects of the girls

1. Getting a complete picture;
2. Getting a changed picture;
3. Getting a clearer picture;
4. Getting a verified picture, and
5. Getting a position in a picture.



Effects presented as **types of cognitive information** knowledge structures after each exposure were changed by cognitive **strategies of appending, inserting, and deleting**.

**Findings raise implications for IT** database design, information interviews, provision of information in media campaigns, and instructional design, as well as methodological issues and areas for further research.

Figure 3. Findings: Five Effects of the Girls' Knowledge

In his dissertation study Ross observed that the school library is a productive setting for researchers as well as a laboratory for student learning. Figure 4 summarizes the major body of Ross' work that consists of studies conducted in Ohio, Delaware, and New Jersey as well as the Massachusetts study which was heavily influenced by Ross' research.

Ohio 2005	Delaware 2007	New Jersey 2011	Massachusetts 2018
<b><u>Student Learning through Ohio School Libraries</u></b> Ohio Educational Library Media Association IMLS	<b><u>Building Capacity and Continuous Improvement of School Libraries</u></b> Governor's Task Force on School Libraries	<b><u>One Common Goal-Student Learning</u></b> The New Jersey Association of School Libraries	<b><u>Equitable Access and Meaningful Use of School Libraries for Students in the Commonwealth</u></b> The Massachusetts Legislature's Commission on School Libraries
Ross Todd, Carol Collier Kuhlthau CISSL	Ross Todd, Jannica Heinstrom CISSL	Ross Todd, Carol Gordon, Ya Ling-Lu CISSL	Carol Gordon, Robin Cicchetti CISSL
<b>How can school libraries be improved? How do school libraries help students learn?</b>			
Survey Recommendations	Survey Recommend-	Survey Focus Groups	Survey Recommendations

Figure 4. Major School Library Studies

The Center for International Scholarship, founded by Ross and Dr. Carol Kuhlthau (Figure 5) supported these four research studies.

**Founded by Dr. Ross J. Todd and Carol Kuhlthau in 2001**, CISSL is dedicated to research, scholarship, education, **and consultancy for school library professionals.**

It focuses on how **learning in an information age school is enabled and demonstrated by school library programs** and **how inquiry-based learning and teaching processes can contribute to educational success** and workplace readiness for learners.



## Center for International Scholarship in School Libraries



Figure 5. The Center for International Scholarship in School Libraries

The Ohio, Delaware, and New Jersey studies led to Ross' model of the Dynamic Agent of Learning. (Figure 6) which strongly establishes the dispensable educational role school libraries play in 21st century learning.

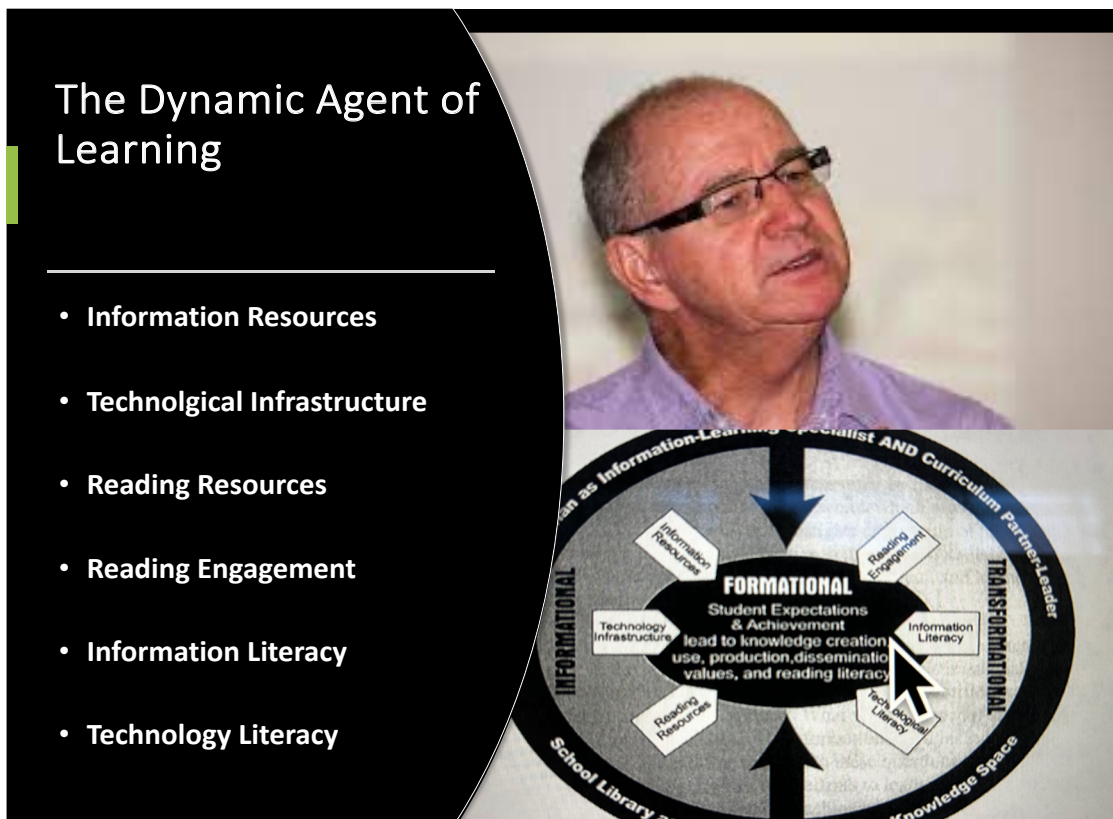



Figure 6. The Dynamic Agent of Learning

These studies also added to our knowledge of how school libraries help students by developing and refining research methodologies used to gather data to include surveys, focus groups, critical incident statements, the use of advisory panels guided by the Dynamic Agent of Learning, a Governor's Task Force and Advisory Groups consisting of school librarians and educators, and the concept of help and of building the capacity of school libraries by making recommendations for their improvement. based on empirical data. (Figure 7).



## Findings

**The concept of help was understood in two ways:**

- 1) **Help-as-inputs** or help that engages students in the process of effective learning through the school library
- 2) **Help-as-outcomes**, impacts, or demonstrated outcomes of meaningful learning-academic achievement and personal agency.

**The study shows that an effective school library is not just informational, but transformational and formational, leading to knowledge creation, knowledge production, knowledge dissemination, and knowledge use, as well as the development of information values.**

Figure 7. The Concept of Help

The Massachusetts Study (Figure 4) was heavily influenced by the impact Ross made on school library research. This study identified barriers and enablers of school library programs and was successful in convincing the Massachusetts State Legislature to establish a School Library Commission which collaborated with the researchers and the Massachusetts Department of Elementary and Secondary Education (DESE). The Massachusetts study collected quantitative statistical data, as modelled by the CISSL studies, as well as qualitative data extracted from the professional experience of teacher librarians. These methods helped to identify barriers and enablers to the provision of school library resources and services as well as the inequities among school libraries' resources and services across rural, urban, and suburban school districts, especially for the provision of digital technology. The biggest impact of the study was that DESE and the State legislature adopted the goal of a resourced school library for every student, which is not standard procedure in the USA.

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Ross' most recent research examined the effects of digital technology on student performance in a New Jersey school library. (Figure 8)

# Social Justice Concepts

- **Distributive Justice: How goods and services are available across diverse populations;**
- **Utilitarian: The greatest good for the greatest number;**
- **Egalitarian: The egalitarianism theory emphasizes equality and equal treatment across gender, race, religion, economic status**
- **Equity vs Equality**



political bel

Figure 8. Social Justice Concepts

Ross collaborated with PT Dadlani to conduct two studies in New Jersey. Information Technology Services and School Libraries: A Continuum of Social Justice (Figure 9) suggested an action-level typology that maps the collective strategies used by students to negotiate socially just conditions during the collaborative process.

## Information Technology Services and School Libraries: A Continuum of Social Justice, 2014

- Develops a social justice typology that maps conceptions of social justice and their relationship to library services;
- Seeks to understand what social justice principles facilitate the provision of information technology service in school libraries;
- Focus groups from 7 exemplary high school libraries in New Jersey;
- Findings: No single social justice principle guided specific actions of the school libraries studied BUT
- A process of moving between different principles of egalitarianism and utilitarianism based on resource availability was used by teachers and school librarians in providing information technology service to their schools.
- A qualitative methodology for studying social justice principles addresses the sustainability of school libraries and their ongoing transformation and development as community information technology hubs and learning centers.




Figure 9. Information Technology Services and School Libraries: A Continuum of Social Justice

The study provides suggestions for a methodological example of how social justice principles can be examined in information-intense organizations. Data revealed barriers and enablers to collaborative learning and other research and evidence-based practices. The study also suggested an action-level typology that maps the collective strategies used by students to negotiate socially just conditions during the collaborative process. The study also provides suggestions for a methodological example of how social justice principles can be examined in information-intense organizations. Data revealed barriers and enablers to collaborative learning.

Ross' last research study, also conducted with PT, Dadlani, examined social justice as a strategy by connecting school libraries, collaboration and information technology. (Figure 10)

### **Social Justice as Strategy: Connecting School Libraries, Collaboration and IT, 2016**

- Track the process of teamwork to understand how student teams work together to build a shared representation of knowledge;
- Examine social justice dynamics and collaborative process involved in the co-construction of knowledge by teams of students;
- Track students' engagement with information sources and technologies and how the teams build strategies to attain preferred collaborative outcomes;
- Track individual learning and group learning and better understand the relationship between social justice concepts and the effective collaborative work/environments.



Figure 10. Social Justice as Strategy: Connecting School Libraries, Collaboration, and IT.

**Ross' research journey into the study of school library practice suggests the potential of school libraries to become major change agents...**

Ross' research journey into the study of school library practice suggests the potential of school libraries to become major change agents in educational practice. So ... (Figure 11)

Where do we go from here?




Figure 11: Where do we go from here?

Ross viewed evidence-based practice as critical to ensuring the future of school libraries. He has left a rich legacy to all who are committed to that vision. His vision can only prevail when teacher librarians and school library researchers work together to create a strong synergy between what they can learn from formal research and what they can do through evidence-based practice.

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