Title	An actor network analysis of libraries as informal learning environments
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Source	*American Educational Research Association (AERA) Annual Meeting, San Francisco, California,* http://tinyurl.com/vjrfhlk (Conference cancelled)

An Actor Network Analysis of Libraries, Literacies and Change in Two Contexts

Abstract

Libraries have been traditionally viewed as places to support the community development of literacy skills, but their importance in a networked and global world is constantly being contested by alternative visions of their social and technological relevance. Whether public and school libraries thrive in particular contexts depends on more than the presence of a space labelled "library". This article uses Actor Network Theory (ANT) as the primary framework for analysing the relations between libraries, literacies and change in two contexts, one in Singapore and the other in Australia. Using a trans-local dialogic approach, the two authors engaged in place-centred, immersive and sustained conversations about their research cases, tracing how people, objects and ideas are received and travel across contexts to effect change. The ANT analysis of the process of innovation and change in both libraries through the minute tracing of the network relations and effects between objects, spaces, emotions revealed the interconnectedness of human and non-human objects in moving people and ideas, highlighting the distributed effect of the social and material. Through tracings of things, people and ideas using ANT, the assemblages that make the transformation possible are made visible enabling greater clarity.

An Actor Network Analysis of Libraries, Literacies and Change

Introduction

Libraries have been traditionally viewed as places to support the community development of literacy skills. They are often hopeful places, encapsulating the future dreams and literacy ambitions of a community but their relevance in a networked, global world is constantly being contested by competing visions of its social and technological functions (Hochman, 2016). While refurbishment and trends in library redesign may improve patronage and library engagement to support a community's literacy needs, mere renovation is no guarantee that a library will be embraced by the community it is meant to serve. At the end of the day, whether a library is perceived as relevant is marked by its users' engagement with it as a valid community resource, often in connection with literacy learning. For library books to be public resources, either one of two kinds of mobility have to occur. Either people have to move into the library space and use the books, or books have to move out to where readers live, or both.

This article seeks to understand the changing part played by libraries in literacy networks through the cross-case analysis of the transformation of two libraries, a school library in Singapore and a public library in Australia. Actor Network Theory (ANT), with its focus on socio-materiality in educational processes, provides an excellent tool for unpacking the processes of innovation and change. Specifically, ANT allows us to trace how ideas, people and things are rendered mobile through the interaction of space, objects and people. The two renovated libraries discussed in this article seemed to share the same objectives of boosting community literacy but were received very differently in the communities in which they were implemented. In one case, access to literacy resources increased as individuals in a society moved towards the library and in other, the removal of a library from a community resulted in reduced access to literacy resources. How is it that the building of one library leads to a literacy gain and another to loss in its community?

An Actor Network Analysis of Libraries, Literacies and Change

Literature Review: How Things Move in Actor Network Theory

Associated largely with Bruno Latour (2005), John Law (1992) and Michael Callon (1986) and initially springing from work in science and technology, ANT is a theory of process and social assemblage that is particularly suited for studying educational practice and change. ANT equalises the relationship between humans and non-human actors within any social assemblage, and in so doing, highlights that things and objects matter as much as humans in any social activity (Latour, 2005). The emphasis on the importance of materiality in ANT provides a fine-grained tool for tracing how various effects arise from the relationships of human and non-human actants within specific educational contexts (Fenwick, Edwards & Sawchuk, 2011; Sorensen, 2009). ANT focuses on the nodes within a network, highlighting the social and material are relational, and come together to bring a particular "distributed effect" (Sorensen, 2007, p. 10). Within this distributed network of relational materiality and social relations, particular forms of learning are constructed.

One key strength of ANT is how it makes visible the established routines and practices that are often taken for granted. Tracking individual resources or materials in relation to their role within an assemblage illuminates the multiple, and often messy, paths taken towards learning. Law (1992) explains that these nodes or "punctualized resources offer a way of drawing quickly on the network without having to deal with endless complexity" (p. 5) – in other words, simplifying or "blackboxing", to use Latour's (2005) term, a resource allows that resource to be more quickly mobilized for dissemination and amplification.

The concept of the library itself can be said to be blackboxed. Suzanne de Castell (2000) explains how the role of the library has shifted over the centuries from focusing on *conservation* within the manuscript culture to *circulation* in the industrial age of print to *community* in this technological age. She notes that the library's ability to survive depends on

its ability to "adapt to new technological environments" (p. 373). In each reiteration of the concept of the library, the library's past connections to literacy are embedded and transformed rather than completely erased. Yet, individuals seldom see past the amalgamated whole of the library and its functions. To understand how the library reconstitutes itself in different contexts and time as a vital support for literacy building requires the unpacking of the blackbox. Tracing the ideas, materials and persons that make up the complex network assemblage in each situation helps researchers and educators to understand how the combination of knowledge and practices in different contexts may lead to educational transformation or not.

To understand how idea and practices are taken up, context must be accounted for (Nespor, 2012; Roth 1996), and in particular, how things and people move in relation to the combination of various elements in specific contexts. In this case, the idea of the library within each context *moves* when it is enacted successfully and adopted by its users. Latour (2005) proposes three criteria that contribute to the mobility of knowledge:

(1) Render the components of knowledge *mobile* so they can be brought back

(2) Keep the components *stable* so they can be moved back and forth without distortion, corruption or decay

(3) Ensure the components are *combinable* so that they can be cumulated, aggregated, or shuffled about like a pack of cards (p. 223)

These "immutable and combinable mobiles" (p. 227) allow knowledge to be disassembled and assembled in ways that make sense to its users ; knowledge that has been converted into immutable and combinable mobiles allows its holders to dominate or master the problem in order to generate new knowledge. For example, maps provide a way for individuals to mobilise knowledge by allowing those who have not actually been to the lands to perceive

the land through the maps, and in that way come to conquer knowledge of these lands (Latour, 2005).

Latour (1986) further explains in *Visualisation and Cognition* that concepts have to be *readable* and *presentable*. In other words, ideas and practices that are made visible and clear to others have a better chance of travelling beyond its source. He gives an example of how the printing press allowed for the generation of new knowledge through its ability to generate "a translation without corruption" (p. 7) – newspapers could be reproduced without alteration on a large scale. Newspapers were immutable mobiles which allowed knowledge to move across contexts and people. In the same way, books are a kind of immutable mobile in that they hold particular content that can travel out of specific places (such as the library) to generate new knowledge through readership.

The concept of mobility is not restricted to physical distance. Rather, it is through familiarity and familiarizing that people develop a sense of control over an object or idea. To gain knowledge is to "be familiar with things, people and events, which are *distant*" (Latour, 2005, p. 220). Other than knowledge which is immutable and visible, mobility is also dependent on how familiar the recipients are with the idea. For example, individuals who are immersed in reading environments from a young age are habitualized, and made familiar with books and ways of accessing books may be more likely to visit a library because of their familiarity with the places associated with books (Author 1, 2013, 2019). For the idea of a library to gain traction, individuals in the community must feel a certain familiarity with the space and the objects and ideas within the assemblage of the library for them to move towards the library and use it.

Contexts and Methods

Common to the two case studies in this article is the focus on the library as a resource for literacy in a community, whether a school, neighbourhood or town. In both contexts, the construction of a new library – the public library in the city of Terra Rossa in South Australia and the Quest school library in Singapore – are seen by policymakers as ways to revitalize the community's engagement with reading as a way towards independent and self-directed learning. Yet, the seeming commonality of approach and purpose did not result in similar responses in these two locations. As we will see this played out very differently in the two contexts.

In our work as literacy researchers, one in Singapore and one in Australia, we have sought to understand children's, adolescents' and families' access to resources to support reading through ecologically-oriented methods. Author 1 conducted an ethnographically-inspired study of six school libraries in Singapore over the course of a year, using time-lapse photography and observations to capture the patterns and rhythms of everyday life in the school library as an informal space of learning, attending to how adolescents respond to books within the space of the library (Author 1, 2017). In Author 2's work with a local community and their access to public library resources, she traced the history of the town of Terra Rossa and the various libraries within the town to understand the responses of the residents to the relocation of the new library (Author 2, 2011).

We argue in this paper for a new way of comparative analysis, which we call *trans-local dialogic analysis*. Bartlett & Varvus (2017) note that:

> comparison may also allow us to better address how insights generated from one study transfer to other cases; in this way, comparison allows us to make stronger arguments for the significance of our research. (p. 15)

Cross-case analysis sharpens case analysis by providing comparisons and contrasts to force greater analytic depth. Trans-local dialogic analysis is a process where researchers from two contexts deliberately sustain engagement of their cases over a period of time and space in order to engage in collaborative meaning-making across projects. It is place-centred, immersive and encourages the sustained dialogue of two case studies in two different locales (Table 1).

Feature of trans-local dialogic analysis	Australia study	Singapore study
Place-centred Context is vital.	Terra Rossa, South Australia	Quest Secondary School and various libraries, Singapore
Immersive Researchers deliberately engage each other's research contexts.	Author 1's two-week research visit in May 2018 where she visited research sites, school and public libraries and engaged with the study's historical data.	Author 2's two-week research visit in September 2017 where she visited research sites, school libraries and engaged with the study's visual data.
Sustained dialogue Researchers maintain sustained conversation with each other, with the education community and research community.	Skype conversations, email exchanges, shared data analysis, roundtables, seminars and workshops conducted at various locations with local and foreign stakeholders.	

Table 1. Features of trans-local dialogic analysis

Trans-local dialogic analysis is place-centred in prioritizing knowledge of context as vital to the analysis. Researchers attempt to immerse themselves in each other's contexts through extended site visits and in jointly analysing data to come to an understanding of their common concerns. In this case we sought an expanded understanding of literacy, libraries and educational change in and across contexts. In both cases, researchers engaged with schools, researchers and educators in the other project when visiting. Initial project issues and insights are reworked through a common lens (in this case, ANT), to rethink initial assumptions, theories and findings. The presentation of each researcher's work to each other over a sustained period created a safe space for rethinking one's work, and to "answer" to

each other's critical questions (Bakhtin, 1981). This concept of comparison is aligned with the researchers' ANT framework to avoid reification of ideas and allow for the generation of new connections, insights and questions (Nespor, 2012).

The continual engagement in two different studies over a sustained period focuses on the process of gaining understanding and reflexivity (Schon, 1995) through dialogue. The juxtaposition and comparison of work across different communities can be fruitful in forcing rethinking initial conceptions of place, research findings and interpretations. Sustained dialogue forced both researchers to move out of their contained worlds and turn back on their own thinking to question whether things might be other than what had been experienced or interpreted, precluding closure. In high-stressed, high-stakes academic contexts, trans-local dialogic analysis forces researchers to slow down and engage with data in context and with each other to generate meaningful new ways of thinking and understanding about libraries, literacies and educational change.

Findings

The Singapore study: the increasing visibility of Quest school library

Singapore is a nation known for its investment in education, and the public library has been instrumental in encouraging reading as a national good (National Reading Movement, 2015). As a small nation-state of 519 square metres, a main preoccupation of the nation's education system has been to ensure that its citizenry is trained to meet the economic needs of the nation (Gopinathan, 2007). Despite its top ranking in international examinations such as the Programme for International Student Assessment (PISA), there remains an anxiety about the ability of its citizens to cope with the demands of an increasingly production-centric, hyperconnected and multimodal world (Author, 2015). A recent concern has been to narrow the reading gap between students of different SES. The role of the school library as a place to

inculcate habits of lifelong learning has taken on renewed significance linked to economic and educational goals (Skills Future, 2019). It is within this context that the project *Building a Reading Culture* was initiated as a baseline study of reading and school libraries in Singapore secondary schools. This paper focuses on one of these schools as a case.

Quest Secondary School is a co-educational government school with autonomous status. In the Singapore context, this means that while the school follows the national syllabus, it has more flexibility to vary its range of programmes. Research in Singapore have shown that children from higher socio-economic status families (often with one parent holding a university degree) are more likely to be high-achieving schools (Teng, 2016). Quest students reported that 40.4% of their fathers had university degrees, thus placing it in third highest range among the six schools studied. At the same time, the survey data showed that 12.4% of its students are on the Financial Assistance Scheme which likely meant that the school had a number of students with fewer home resources to support reading (Loh, 2018).

The Quest library had been redesigned prior to the study, with the intent of drawing students towards independent reading. In an hour-long interview, the principal wanted the library to help students "find their gateway" into reading. This belief was shared by the Head of Department (HOD) of English who had been tasked to lead the redesign of the library. The HOD told the research team that "the old library was [a] wasted space" that was "barely visited" despite being located next to the cafeteria and main lobby. She explained that the original space, which included a classroom, had false ceilings and tall metal shelves where many old and some new books were stored. It was dark, musty and unattractive.

A Design Thinking process was used to guide the redesign of the library (Coleman, 2016). This library team members, comprising five teachers, followed two teachers and two students for a day to create a user journey map to understand their daily needs. They also conducted extensive research on public and school libraries in Singapore and different parts

of the world before working closely with an interior designer to create their version of a library optimised for adolescents reading. The classroom walls were removed and replaced with larger windows created to bring in light. New white bookshelves replaced the old metal ones. Nooks for studying were created and red high-backed single seater armchairs were grouped beside the window to provide a reading corner. The HOD explained that even the green and white palette of the library had been chosen based on their research on colours that would be attractive to adolescents while providing a calming effect.

Importantly, the entire book collection was weeded and reduced from approximately 10,000 books to about 4,000 mostly new books. Instead of using the Dewey Decimal system, the team decided to organize the books by genre such as fantasy, science fiction and romance with the intention of better highlighting the books to the students. Visually striking pop-up books, picture-books, comics and attractive information titles were included in the collection.

In an interview with two of the library team teachers, they told us about how they were actively working on improving the programming and social outreach via Instagram to draw students into the library. Throughout the year of observation, the research team observed students attending movie screenings, calligraphy classes, book talks and a band performance in the library. The Instagram page seemed well-subscribed and utilized by students. At the time of the study, it had 707 followers and was updated on a regular basis. For example, one Instagram post showed a Darth Vader doll, two Star War novels and was accompanied by the post.

Time for some fun reading this hols! Have you signed up for #theforceawakens yet?

You don't wanna miss the treat! [October 27, 2017]

During one of our observations, a student told us that she had come into the library to borrow a book because it was featured on the Instagram page.

The school measured the success of the library through the increased loan rates and unique borrower rates. Loan rates doubled from pre-renovation loan rates, evidence that students were borrowing more books. The number of unique borrowers increased by one-third, suggesting that the library had managed to secure new patrons. The research team documented student behaviours in the library through time freezes (counts of student behaviours over 8 hours over 15 days of observations), field notes and time-lapse photography documenting selected areas of the library. Compared to the other five schools involved in the study, the research team saw (and counted) many students browsing, reading and socialising around books in the library (Author 1, 2017). In a reading survey administered to the entire school, students responded to the open-ended question about their library positively:

- Our school library is beautiful and have a lot of interesting books to borrow.

- The library has a nice environment. I love it so much. It is a nice place to read and relax.

- The library is very calming, fun, has a lot of books I am interested in.

- The library is designed to better focus on our reading because back then, our library was very, very dark.

Here, we see the principal and teachers' concept of the library as a reading space being adopted by the students, who participated in the construction the library as a vibrant and attractive space for engaged reading. The assemblage, consisting of physical furniture, attractive books, social media and library programming work together to convey a unified concept of the library as an exciting location for the adolescent students, thereby drawing students into the space of the library for the literacy purposes for which the library was redesigned.

The significance of the Quest library as a mobile concept was further strengthened during the period of the research as a result of nation-wide concerns with reading (Salleh, 2016). Within MOE, the central responsibility for managing school libraries was shifted from the Educational Technology Division (ETD) to the Curriculum Planning and Development Division (CPDD) at the Ministry of Education (MOE), leading to a stronger focus on reading. The redesigned Quest school library provided a visible concept of an improved school library, which was further enhanced by the dissemination of research findings from the BRC research showing the increased reading behaviours at Quest Secondary in comparison to its historical data and five other libraries studied. Over the period of our research and after, the design of professional development workshops, keynotes and talks by the project principal investigator and the willingness of the school to host visits to their library also served to move their concept of a school library as a model for schools aspiring to rethink their libraries as a central space for cultivating engaged reading as a core literacy practice in schools.

The Australian study: the (dis)appearing public libraries of Terra Rossa

The story of a city's libraries can tell much about the part played by literacy and, more broadly, by civic learning, in the life of a community. From the researcher's perspective (Author 2), this story began as a retrospective investigation, an attempt to discover how a brand new, well equipped library located adjacent to a major shopping centre appeared to be invisible to some of the town's residents. Even coming to realise the issue was like fitting together pieces of information and impressions into a jigsaw puzzle. When people having been living in a town for generations, they don't necessarily see what a stranger cannot see, or feel the need to tell stories about even the recent past.

Funders of literacy research often target their endeavours towards improving literacy outcomes in disadvantaged communities and this is what led Author 2 to Terra Rossa. The

town had experienced over time major changes in its industrial base leading to a loss of employment opportunities and an influx of welfare recipients, as the state government sought to capitalise on the unanticipated glut of housing, built to accommodate no-longer-needed workers. Statistics supported its characterisation as a zone of disadvantage. Amongst families where there were children, more than a quarter had both parents unemployed. A little over a third owned, or were paying off, their property and only just over half lived in a detached house. A quarter of families did not have the internet at home and over 12% did not own a car (ABS xx). At least, that is one way to tell the story.

On Author 2's first visit to the city, she chose accommodation near to the beach and noted mothers and babies socialising in a newly built café like any middle-class suburb in the metropolis. However, a short walk away was a main street full of closing down sales and charity shopfronts. This area, which I later learned was referred to as "town" by locals, had been the centre of Terra Rossa in earlier times. It had been home to the Terra Rossa Institute, opened in 1920 which housed a reading room and subscription library (Harry, 2007). Now, however, there was no sign of a library, institute or book shop in the old town area, where there had once been all three.

The research team ran a survey of 237 parents of children aged 4 to 7, with a focus on beliefs about, and access to resources relating to, children's reading (Author 2, 2017). When parents were asked what kinds of resources they sought, the top ranked item was "books my child will enjoy" (71%). However, when asked who provided information and resources, only 29% selected 'librarian' as someone they consulted. Teacher topped the list (78.5%) followed by family member (63%). Also significant was that more than a third (35%) chose *not* to answer the question: What print materials have you accessed?

Qualitative responses provided further insights into challenges experienced by parents. While only 17 offered optional qualitative responses to an open question regarding access issues, their responses were interesting:

- "[I] buy books from the Salvos – unable to travel further than the neighbourhood."

- "Hard to find good books."

- "Not having a local book shop can make it difficult at times to get books but we are lucky enough to have the means to travel to buy books."

The question arises: What about the public library, a very well stocked, new facility located near the same bus stop that served the town's main shopping centre? Why did so few respondents see a librarian as someone who could assist in their search for children's books? An unexpected insight into this question arose at a meeting hundreds of kilometres away from Terra Ross, at the state education department's head office. The meeting concerned a project aimed at increasing the participation of Indigenous students in a state-wide recreational reading program. Terra Rossa is within the traditional lands of a local Indigenous community and was on the circuit of the department's Indigenous literacy advisor.

At this meeting, the issue of accessing books in regional and remote areas was raised and Terra Rossa was specifically mentioned. The Indigenous advisor expressed her concern that "there is not even a library in the town any more". Having visited the town's library, Author 2 was able to correct this perception, but wondered how a story about the disappearance of the library had come to be accepted and circulated. Libraries are usually considered such stable fixtures in a city's cultural landscape that this situation was surprising, as well as concerning.

The town's present and retired library workers provided some of the history. It appeared that the local council had previously provided two branch libraries, one located in the old town and the other on the far side of the city, which will be referred to as 'Town' and

'West' respectively. The Town Library was frequented by residents of the most established part of the city, which also housed the town's hospital, bank headquarters, oldest public and private schools, and an attractive garden and sports complex. Many streets in this area enjoyed views of the sea and its larger and more characterful houses were preferred by the town's professionals. The Town library maintained a connection to the town's history, which had started with the Institute, of providing cultural services to citizens.

The West neighbourhood was an inland suburb furthest away from the old town. It had taken a larger share of the welfare community which had been sent up to occupy surplus government housing, following the departure of the town's main employer. Many of its families had experienced multigenerational welfare dependency. The West Library was adjacent to a small shopping strip which also included a second-hand bookshop run by a charitable organisation.

A retired library worker explained the strong local attachment residents had to their neighbourhood library: "I think each area, they considered that *their* library." This was consistent with a general pattern of localised social territory: "[If] you live in town, you go to Town Primary School. You go to Town Library. You don't really venture out too far, out anywhere else."

So, when the council decide to rationalise library provision into a single facility, in order to "create general savings through elimination of duplication" (anon, 2007a), it is not surprising that resistance was forthcoming (anon, 2007b). Town residents complained about the distance from their area and the siting of a library in a commercial precinct, which was believed to somehow devalue its character as a cultural institution. As one librarian recalled, "[Town] people would not even return their books to the new library. Some of them said they would never set foot in it." West residents, for their part, wanted their branch to be renovated and expanded rather than removed. It had, in fact, more subscribers than the Town branch

and a younger population. The vibrancy of the West branch challenges the assumed connection between disadvantage and cultural impoverishment, suggesting there are other stories that could be told about Terra Rossa.

Residents of the west were about to lose not only 'their' library but also the local second-hand bookshop. In another act of rationalisation, the charitable organisation integrated a book section into its larger facility, along with clothes and household goods, located in a neighbourhood about half way between the western and old town districts. Thus, the west neighbourhood went from being a book zone to a book desert. This is not to deny the valued presence of books in people's homes but to acknowledge a material reality - the local, public provision of books had taken a significance dive.

So far, we have not mentioned a fact about Terra Rossa's environment. On the edge of the desert, it has a hot dry climate which can (and, increasingly does) get into the 40s (Celsius) during the summer, which also happens to be when the longest school holiday is held. Author 2 was informed by a local charity worker that over 40% of West residents did not own a car, as an unpublished survey had revealed. The charity ran its community events in a local park within walking distance of homes. As for public transport, even waiting at a bus stop on days of extreme heat, particularly with young children, risks heat stress. Even impoverished families sent their children to school in taxis on the hottest days.

In the next stage of the project researchers undertook a design process aimed at addressing the dual problems of access to books and awareness of the new library. For this paper, however, the case throws up a significant contrast to the Singaporean case described earlier. In Terra Rossa, redesign and modernisation of the city's public library did not succeed in attracting the previous users of the small, old-fashioned local library branches. The net result was arguably a loss of literacy resource, rather than an increase.

Unboxing the library's assemblage: a network effect discussion

In this discussion section, we bring up key ideas that arose from the trans-local dialogic analysis, which include the writing, re-writing and discussions of the two case studies of Quest school library and the Terra Ross library. The ANT analysis of the process of innovation and change in both libraries through the minute tracing of the network relations and effects between objects, spaces, emotions revealed the interconnectedness of human and non-human objects in moving people and ideas, highlighting the distributed effect of the social and material (Sorensen, 2007). The materialities that contribute to mobility are often blindsided when analysing educational change when in fact they should be central to the implementation of particular policies and ideas.

The presence and availability of non-human actors, in relation to human actors, contribute to the mobility of ideas and people. Non-human actors in the Quest study included books, shelves, furniture, light, organizational structures, technology (Instagram posts, fairy lights) and props. It was the relation of non-human actors to each other, which may lead to human actors (students) to move towards books. To give an example: it is armchairs **beside** interesting books **on** attractive display shelves that may communicate a sense of plenty in Quest, attracting students to the space and the books housed within. It is the combination of social activities (programming, advertising on social media) alongside the presence of material objects, alongside students that utilize the library that make up the library assemblage.

Failure for an idea to catch may result in part from a "punctuation" in the network (Latour, 2005), which disrupts the meaningful bundling of the various things and people in an assemblage. In the Terra Ross case, buildings are non-human actors that are vital in the Terra Ross study as are cars as means to travel towards books. Buildings in relation to other buildings (library **beside** bookstore in shopping strip) in the community space provided

plentiful provision of books. Thus, when two branch libraries are merged into a larger library in the Town area, the West residents cease to have access to the books within their neighbourhood. The policymaker's failure to consider the resident's dependence on a vehicle for moving in the arid desert heat of Terra Ross is a punctuation in the network that puts a stop to the meaningful assemblage of people and things that comprise the library within the West Community.

Secondly, the visibility of libraries is vital for the idea to take root within a community. Problems of visibility can occur on any scale. Within a town or school the re-siting of a library or the reorganization of resources can render it invisible or make it more visible. Within a library, inadequate lighting and crowded displays can also mean individual books are effectively below the threshold of salient visibility. While the new public library at Terra Ross was visible in terms of being located in a prominent area of town, it is invisible insofar as it is out of the sight of those it is intended to reach. The Quest school library had always been located at a prime location between the school cafeteria and lobby but until it was renovated and perceived as a "cool" and "happening" place with interesting books, programme and social media outreach, it did not catch the attention of the students.

While the Singapore case is primarily a close-up examination of spaces *within* a library and the Australian case is more concerned with the *placement of libraries* within a community/town space, the contrast of both libraries illustrate how it is a combination rather than a single material or idea that translates to mobility for a concept. At Quest, there has been a deliberate program of modernisation to bring the 'old' space into a new era. The refurbished library and social media outreach made visible the new concept of the library as a "happening", "cool", "exciting" place. Outside of the school population, the hosting of school library visits, research projects and professional development courses highlighting Quest's

library effective transformation enhancing the school's reading culture extended the reach of that one model of the library by making it visible to other educators and schools.

The Terra Ross case problematises the idea that space modernisation is the answer to a perceived problem of libraries being 'old-school'. The design of the new library in Terra Ross had many of the modern features described in Quest. Yet for the Terra Ross residents, the previous libraries were of valued and were not seen as 'old'. The idea of visibility is not just in relation to physical space. While the Quest model of a school library travelled across schools through research presentations and stories of visits to the library, drawing the interest of students, visitors and educators towards their concept of a library, the Terra Ross library did not move in the same way. While policy-makers may have felt that the renovated library was attractive, the intended users of the Terra Ross library felt alienated due to the relocation of the library, citing its location as a reason not to access the library in the way they utilized the older (but physically closer and more familiar) library. Visibility is thus required not just in relation to physical space but depends on the perceptual alignment between the user and concept.

The mobility of concepts and people toward particular concepts can thus be seen as a process of familiarisation. In *Science in Action*, Latour (2005) explains that individuals begin to start knowing something when they encounter it repeatedly. He gives the example of how knowledge is built through repeated expeditions to a new location, with visitors gathering new information each time to build up their knowledge of that place. In the case of the Quest library, the combination of things, ideas, programmes came together as an "immutable mobile" to carry a visible concept of a reading school library in an educational system that was more familiar with a traditional vision of a library as an archival space for books. On the other hand, the Terra Ross residents were already familiar with their community library, which was visible to them and utilized by them. However, the relocation of the library to the

Town area removed a familiar assemblage within the West neighbourhood. While there was indeed a new library in Terra Ross, the physical and affective distance made difficult the repeated visits that would allow West residents to become familiar, to feel connected to the new library.

Conclusion

The concept of the library and its relation to literacy is a blackbox, insofar as it is seen as an unquestioned good. Yet, whether the library is taken up by the community as a viable concept for engagement in literacy practices depend on an assemblage of constantly moving factors – from material objects such as books and shelves to memories of libraries past and present, and their relation to each other. The library renovation projects in Singapore and Australia consisted of a process of disassemblage and assemblage of features and ideas, old and new in relation to the need for different literacies and technologies (de Castell, 1992) in these global times. Focusing on the network of relations between actors and materials that constitute the library reveal more complex understandings of libraries in practice, and their access by perceived target users of libraries in each context.

Clearly, the case studies suggest that materiality should be a significant consideration to understand how educational change is implemented and responded to in practice. At the same time, they highlight that visibility and familiarity are key to the mobility of concepts. The library renovation in both cases attempted to modernise the library through similar objects such as books, furniture and technology yet the combination or the concept of the library as a place to be travelled in one place but not the other. Mobility is the result of interactions and perceptions and attending to the network effect of material objects in relation to space and social relations expand the possibilities for understanding why certain ideas or practices are taken up or not for educational transformation. The analysis also highlights the

relation between policymakers, educators, librarians and library users – in the institutional structure of nation, community and schools, whose perspectives should policymakers consult and consider when redesigning library spaces? Could a user-oriented, place-making perspective be more sensitive to the varied needs of different individuals within a community space?

The study continues in the tradition of ethnographic studies in literacy, drawing on the analysis of comparative case studies for insight into libraries, literacies and educational change. The use of trans-local dialogic analysis for this article demonstrates the necessity for global conversations that account for the local. This international collaboration across two contexts allowed the researchers to engage in deeper analysis and reflection of their cases better understand their work in broader contexts, which generating insights about local contexts. The study highlights there is no one size fits all when it comes to policy and practice – the place of libraries in different contexts, and the relation of these changes to mobility is very much dependent on local social contexts and power dynamics, factors that policymakers should do well to consider when redesigning libraries for literacy learning and educational transformation.

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All authors' works have been blinded in this article.

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