



RESEARCH REPOSITORY

*This is the author's final version of the work, as accepted for publication following peer review but without the publisher's layout or pagination.
The definitive version is available at:*

<http://dx.doi.org/10.1007/s13158-015-0150-0>

Lee-Hammond, L., Hesterman, S. and Knaus, M. (2015) What's in your refrigerator? Children's views on equality, work, money and access to food. *International Journal of Early Childhood*, 47 (3). pp. 367-384.

<http://researchrepository.murdoch.edu.au/id/eprint/28632/>

Copyright: © Springer Netherlands
It is posted here for your personal use. No further distribution is permitted.

What's in your refrigerator? Children's views on equality, work, money and access to food.

Paper submitted to the International Journal of Early Childhood, 2015.

Libby-Lee Hammond, *School of Education, Murdoch University, Perth, Australia*

[Sandra Hesterman](#) , *School of Education, Murdoch University, Perth, Australia*

[Marianne Knaus](#), *School of Education, Edith Cowan University, Perth, Australia*

What's in your refrigerator? Children's views on equality, work, money and access to food.

Abstract

It has been argued that the early years have the greatest potential to impact on lifelong learning with regard to equality for sustainability (UNESCO, 2008). This study demonstrates how very young children may develop behaviours, attitudes and habits that can have a long-term influence on their actions with regard to sustainability. This research project investigated ways of thinking about poverty and food security with children in a low-income community. Fifty two children, aged six-seven years, attending a Western Australian public primary school were invited to share their ideas about families' access to food from a perspective of wealth and poverty. The single case study method demonstrated how sustainable development in broader terms may be addressed with young children to enable them to express their points of view on economic and social as well as environmental issues. Project findings indicated that the children understood the relationship between work, money and the capacity to access food. They also had an optimistic outlook on how to remove inequality, or 'how to make things fair'.

Keywords: equality; poverty; work; children's perspectives; resources; sustainability; food

Introduction and Background

This research project posed issues of poverty and equality with young children in order to explore their thoughts about the availability of food in various households. Using stories, photographs and drawings to generate conversations and questions with groups of young children, the researchers were able to elicit children's unique insights into the worlds they inhabit as well as their perceptions of the worlds other children around the world inhabit.

This project forms part of a larger international project on Education for Sustainable Development. This global project, initiated by the *Organisation Mondiale pour l'Education Préscolaire* [World Organization for Early Childhood Education] (OMEP), has involved participants in 35 countries from all regions of the world. The emphasis on equality for sustainability arose from a United Nations (UN) survey of Ministries of Education in UN member states. The survey, conducted as part of the UN decade of Education for Sustainable Development (UNESCO, 2014), found that the highest priority to be addressed in achieving sustainable development was *poverty* and this was rated above climate change and agricultural and food security (OMEP, 2014).

Hence this research project posed issues of poverty and equality to young children in order to explore their thoughts about the availability of food in various households. Using stories, photographs and drawings to generate conversations and questions with groups of young children, the researchers were able to elicit children's unique insights into the worlds they inhabit as well as their perceptions of the worlds other children around the world inhabit. This approach could be described as in keeping with Clark and Moss' (2011) Mosaic Approach.

Children involved in this study were aged 6-7 years and were enrolled three separate in Year One classes at a primary school located in the suburbs of a capital city in Australia. The school, located in a low-income area where, according to the Australian Early Development Census (2012), 46.3% of children are considered developmentally vulnerable in at least one domain of their development. Therefore children in this community are placed at more than twice the rate of developmental vulnerability as children Australia-wide (AEDC, 2012). In addition, forty-nine percent of the children attending this school have a language background other than English with forty-three different first languages. Seven percent of children in the school are members of families who have entered Australia as refugees and 17% of students in the school at the time of the study identified as Aboriginal or Torres Strait Islander (Department of Education Western Australia, 2014).

The Australian Early Development Census (AEDC, 2012) is a national survey of teachers conducted tri-annually. Teachers of children enrolled in their first year of full time education complete the survey with a view to mapping children's developmental status across a range of domains. In 2012 the data regarding nearly 300,000 children was collected. The survey examines children's developmental progress in the domains of physical health, social competence, emotional maturity, language and cognitive skills, communication and general knowledge. Criticisms of the AEDC are, in our view, appropriately levelled at its universalist assumptions regarding child development, based on Piagetian traditions. The AEDC's 'age equals stage' assumptions and image of the child do pose significant limitations for children from culturally and linguistically diverse backgrounds (Agbenyega, 2009). However, it is not the purpose of this paper to provide a detailed critique of the AEDC but to draw on the survey data to offer the reader some points of comparison for communities in Australia, and to locate the children involved in the present study within the wider context of Australian children.

The project design was collaboratively derived in dialogue among the researchers and the school staff (teachers and school administrators). One researcher's previous professional relationship with the school community also informed the approach, i.e. knowing the socio-economic background of the community and the cultural

diversity of children. It was decided among the researchers that a focus on poverty and access to food was an appropriate starting point to elicit children's responses regarding equality for sustainability.

Literature Review

Food security exists “*when all people at all times have access to sufficient, safe, nutritious food to maintain a healthy and active life*” (Food and Agriculture Organisation of the United Nations, 1996). In a recent national report the Australian Government adopted the following World Health Organisation (2015) definition of food security:

“Food security is generally thought to have four dimensions:

Food availability—sufficient quantities of food are available on a consistent basis

Food access—sufficient resources are available to obtain appropriate foods for a nutritious diet

Food use—appropriate use, based on knowledge of basic nutrition and care, as well as adequate water, sanitation and food preparation facilities

Food stability—stability of availability and access over time.

If one or more of these dimensions does not exist for a person or household (for example, not knowing when or what your next meal will be), it is termed food insecurity” (Australian Institute of Health and Welfare, 2012, p 97)

Food insecurity affects approximately one in nine people internationally (Australian International Food Security Research Centre, 2015) and is a phenomenon affecting certain groups within developed countries as well as those in developing countries (Rosier, 2011). In Australia a decade ago it was estimated that five percent of the population were affected by food insecurity. Burns (2004) elaborated that the unemployed, single parent households, low-income earners were in high risk groups for food insecurity. In 2012 it was Indigenous and linguistically diverse people, including refugees, in Australia who were identified as experiencing the highest rate of food insecurity compared to other Australians. In developing countries the most vulnerable groups with regard to food security are women in rural areas and children (Food and Agriculture Organisation of the United Nations, 1996).

When we refer to education for sustainable development we begin to identify many opportunities for educators to work sensitively with children with regards to food security and sustainable futures. Sustainable development is much broader than environmental topics and incorporates three main aspects; economic, social and environmental issues (European Panel on Sustainable Development [EPSD], 2010). These three areas are referred to as the pillars of sustainable development (Siraj-Blatchford, 2009). When discussing social sustainability Siraj-Blatchford (2008) includes social, cultural and political issues that impact individuals and social groups. Education for sustainable development thus raises questions about global citizenship, social justice and the rights of human beings. Elliott and Davis (2009) discuss a re-defined way of perceiving education for sustainability by investigating power relationships and the marginalisation of some social groups, with the emphasis on the notion of humans as agents of change. Children are included as one of the marginalised groups in this discussion. Clark (2005) encourages adults to listen to children, to be actively involved and play a visible role in communicating children's ideas about day to day events that may affect them. Indeed the Convention on the Rights of the Child (United Nations, 1990) enshrines the child's right to participate and make decisions. Food security is one of the sustainability issues affecting children globally and hence the focus of this study highlights an issue that incorporates all of the pillars of sustainability.

In recent years there has been a shift in thinking about how children are perceived in the political, economic and social spheres of the community. In particular, the view that children are competent and capable replaces the deficit view, where children were seen as weak and powerless. These ideas have stemmed from the new sociology of childhood where children are seen as protagonists in their own lives (James & Prout, 1997; James, Jenks & Prout, 1998; Jenks, 2005). Instead of children being objects of research they are involved and become co-researchers signalling a shift in power relationships. Kellett (2005) notes the impetus of the United Nations Convention on the Rights of the Child as being instrumental to this shift in thinking. Rinaldi (2005) also

recommends listening to and consulting with children and that children's different voices can act as a catalyst of change.

In discussing children's lived experiences of poverty McDonald (2009) notes that children's voices matter. Their perceptions and experiences of poverty are relevant, and can make a valuable contribution to future social policy decisions. The impact of poverty and disadvantage shapes children's lives; therefore, it is necessary to understand the perspectives of children themselves. Further, openly discussing poverty with children may assist in challenging stereotypes since Weinger (2000) has found that prejudices about wealth and poverty become established from a very young age.

Poverty affects children's immediate health and wellbeing but also has far reaching consequences for the future, impacting on the potential of individuals and communities to live full and healthy lives. When articulating children's views "research into children's lived experiences of poverty must be research that is *with* and *by* children, as well as *about* and *for* children" (McDonald, 2009, p. 17). Research that focuses on children's lived experiences reveals information about their backgrounds including their families and communities. Utilising home and community resources and household practices in research with children enables researchers to elicit children's 'Funds of Knowledge' (Gonzalez, Moll & Armanti, 2005). Families tend to have the most influence on children's development and socialisation (Barbour, Barbour & Scully, 2011). However, families do not function in isolation but engage with social systems, institutions and communities (Bowes, Watson & Pearson, 2009). Family life and experiences will influence children's understanding and views on the world. Using children's 'funds of knowledge' encourages them to engage in more critical perspectives about issues relating to sustainability issues as they provide a familiar context and is broader than just the school environment. Broader perspectives and diverse points of view are likely to be accessed when learning experiences are derived from children's home and community experiences (Skouteris, Edwards, Rutherford, Cutter-MacKenzie, Huang & O'Connor, 2014).

The early years are a significant time for children to engage with education for sustainability (UNESCO, 2008). Early childhood experiences have the potential to support lifelong learning with regards to sustainability issues; shaping attitudes, knowledge and actions (Hagglund & Pramling Samuelsson, 2009; UNESCO, 2008). Children in their capacity as active citizens need to be seen and heard in their communities now and in the future (Davis, 2008). Curricula documents in Australia support the teaching and learning of education for sustainability. The Australian Early Years Learning Framework (Department of Education, Employment and Workplace Relations [DEEWR], 2009) emphasises in Outcome 2, *children's active involvement in their world by having opportunity to contribute to decisions, become socially responsible and to show respect for the environment*. Outcome 3 focuses on *wellbeing and the awareness of healthy eating and taking responsibility for their own health*. The Australian Curriculum (Australian Curriculum, Assessment and Reporting Authority, 2014) prioritises sustainability in what is termed a *cross curriculum priority* for all Australian children. This priority means that educators are required to embed sustainability into all content areas in the mandated curriculum. Specifically, Health and Physical Education also promotes personal, social and community health with strategies to empower children to contribute to healthy active communities. Young children can be empowered to become agents of change (Elliott & Davis, 2009). They have the capacity to understand issues related to the environment and to demonstrate behaviours, attitudes and habits that can have an influence within the community (Pramling Samuelson & Kaga, 2008).

Young children are capable of sophisticated thinking in a range of issues in regards to education for sustainable development, and open dialogue is important for establishing dispositions required for lifelong learning (European Panel on Sustainable Development [EPSD], 2010). Children from an early age become aware of their identity as a family member and stereotypes and biases become established (Siraj-Blatchford, 2008). Ideas about inequality are considered to emerge from around the age of five years and "popular prejudices about wealth and poverty (are) firmly fixed in their minds" (EPSD, 2010, p. 47). Therefore, participation in

discussions about fairness and inequality may promote a difference in early attitudes and values. Dialogue with adults about social justice issues can foster children's development of positive perceptions about themselves and others. Hagglund and Pramling Samuelsson (2009) suggest adults include support strategies to scaffold children's sense of identity. This includes taking an approach to promote children's awareness of time and place as changing entities and that they as beings are part of a wider local and global context. A sense of connection and belonging assists in the development of a sense of identity (Australian Government, 2009). As children recognise their growing identity and independence they also realise they have ability to influence decisions and actions, not just of themselves, but of others too. As children build relationships with others in the world around them it provides many opportunities for new learning and reflecting on different perspectives. Clark (2005) refers to multifaceted listening, where groups of children listen to each other and reflect on ideas and experiences to develop multiple perspectives.

Theoretical considerations

In this research paper we adopt a social constructivist theoretical framework (Vygotsky, 1980). To this end we emphasise the importance of culture and context in understanding in both the experiences and expressions of young children. In addition, we base our data analyses on constructions embedded in our own socio-cultural frameworks. Rogoff (1995) refers to these as lenses, through which events are interpreted and understood. As researchers we adopted a participant observer role, embedding ourselves in the social context of the early years classroom as co-learners discussing the topic of food security in the data collection phase of the research.

Methodology

This project aimed to explore a human problem, *equality for sustainability*. Employing single case study methodology, the fieldwork involved "a process of deliberate inquiry in a setting" (Lather, 1991, p.12) to observe, listen and document young children's ideas about families' access to food from a perspective of wealth and poverty (Creswell, 1998, 2013; Erickson, 1986, p.140; Lather, 1991). The researchers had an intrinsic and instrumental interest in developing a single case at the group level to better understand how equality for sustainability was understood by young children residing in a low-income community (Creswell, 2013; Yin, 2012). Case study research presents in different forms, employs a variety of strategies and is subject to a range of definitions with reference to what constitutes a case. In this research case study was defined as, "an empirical inquiry that investigates a contemporary phenomenon within its real-life context; when boundaries between phenomenon and context are not evident; and in which multiple sources of evidence are used" (Yin, 1989, p. 23): namely, participants' imaginary and visual representations, and the words they used to express thought, feelings and images. While three Year One classes were involved in the project, a multi-site comparison of individual classroom data was not sought, but rather, the study focused on the collective data to identify common meaning-making themes collaboratively explored and discussed by children at one school.

Ethical clearance was obtained from the University Human Ethics Committee and informed parent consent was obtained for all participants.

Participants

Participants were chosen from three Year One classes in one school, a total of 52 children participated. The children were aged 6-7 years and are from diverse cultural backgrounds with strong linguistic diversity. As mentioned in the background to the paper, the total population of Aboriginal children in the school is 17% and the students with language backgrounds other than English represent 49% of the total school population. In light of the Australian population statistical information presented in the literature review, the children in this group may well be facing food insecurity issues in their daily lives. All children present at school on the day of data collection participated in the project following a verbal consent process. The classroom teachers were present during the classroom activities but did not participate. Three researchers and a research assistant

attended all three sessions. One of the researchers had previously conducted research in the school and had developed a relationship with the three classroom teachers and some of the children involved in the present project.

Research questions

The broad research questions guiding this study are:

What are children's understandings about poverty? and,

How do children make sense of people having unequal access to food?

Prior to the school visit, the researchers postulated a minimum number of questions that would elicit children's perspectives and support their participation. Children participated in a drawing activity, then a focus group discussion.

Semi structured, open-ended research questions that were asked of the children were:

- (1) What is in your fridge at home? (drawing activity)
- (2) Why is one fridge full of food and the other is not? (focus group discussion using photographs)
- (3) What happens to children who don't have enough food?
- (4) What could we do to make the fridges more equal?

Additional clarifying questions were used to encourage children to elaborate on their responses; and, these were usually questions like, "Can you tell me more about that idea?" and "How do you think that happens?"

Listening to the children

The children remained in their classroom groups and each classroom session was approximately 45 minutes in duration. Each session followed the same format:

Stage 1: Children came together as a whole group. One researcher who was known to some of the children introduced the project and asked if they would be willing to help us with a problem about 'food'. As an orientation to the topic, the children were asked to close their eyes and try to remember what was in their fridge at home¹. Children had a few minutes of quiet time to think. The next task was then explained to the children.

Stage 2: Children dispersed to different group settings of six desks. On each child's desk there was a black felt pen and an A3 sheet of white paper folded to represent a fridge that could be opened. Children were asked to draw what was in their refrigerator at home. The children spent approximately 20 minutes carefully representing the contents of their refrigerators. Some children labelled the items in their fridge though most relied on the researchers to help them with spelling to label them. With the children's consent, the drawings were collected for later analysis.

¹ It was assumed that each family had a refrigerator. In Australia, unless a family is homeless, it is assumed that they have access to a fridge to avoid food perishing.

Stage 3: Children were asked to assemble on a carpeted-area and sit in a circle formation to listen to a story about two families. One researcher then showed the children two large photographs of the families' two different fridges, one very well stocked fridge and one with barely any food. The researcher then initiated the discussion by asking, "Why does one fridge look like this (full of food) and the other look like this (almost empty)?" Children were encouraged to hypothesise. The researchers then asked the children a series of open-ended questions.

During the fieldwork there was an emphasis on the researcher's role as an active participant and learner alongside the children rather than an expert making judgements or pronouncements in a didactic fashion. The researchers gathered children's ideas from the drawings and discussions to facilitate their understanding of the research questions. The project was conducted in the usual setting of a regular classroom where drawing pictures and participating in discussion were frequent occurrences during the school day. Having gained children's permission through a verbal consent process and adhering to the Australian National Statement on Ethical conduct on Human Research consent procedures the children's responses were audio-recorded, notes were written and some photographs were taken. The researchers were mindful that during data analysis, the guiding research questions gave shape to the participants' responses and shaped the findings of this particular case.

Analysis

Following the fieldwork, each researcher independently documented their impression of the research context, the children's engagement, and the themes that emerged in each class discussion. Later, the researchers met to collaboratively conduct a content analysis (Hsieh & Shannon, 2005) of all data collected from the three classes (drawings, transcripts of discussions, field notes and photographs). This process was used to identify dominant themes through a process of triangulation (Flick, 2007; Patton, 2002). This process involved cross-referencing different data sources to confirm the 'accuracy' of researchers' making of meaning and "using multiple perceptions to clarify meaning, verifying the repeatability of an observation or interpretation" (Stake, 1994, p. 241). Systematically, the children's drawings of food items in their fridge were analysed. Observations of children interacting with others while seated at their desk were analysed, and the verbatim audio-recorded discussion of each research question asked was also analysed. The researchers became aware of two distinct but related points of analysis. The first was the children's own drawings, the reflection of children's sociocultural and economic contexts were evident in the type and quantity of items they depicted in the fridges located in their own homes. This will be elaborated upon in the data analysis section below. The second point was about how children perceived the 'other' in regard to the full and nearly empty fridges. Gasps of 'wow' filled the room when the full fridge was shown and this proved to be a fruitful starting point for discussion about the anonymous families who owned these fridges and how it came to be that one family had a lot while the other had very little.

Project Findings

The children were invited to participate in three tasks; to conceptualise, draw and talk about the basic and universal human need for food. The tasks provided opportunities for children to make personal connections with their lived experiences and share funds of knowledge related to accessing food (Moll, Amanti, Neff, & González, 1992). The following writing provides elaboration on four dominant themes identified during the final analysis of the collective data. The writing also includes the story narrative relayed to the children to stimulate group discussion on families' access to food, and the child's voice in response to the research questions asked (identified in italic font).

Theme 1: Sharing Funds of Knowledge about Food

After a time to close their eyes, imagine and recall, children were invited to draw the food items stored in their fridge at home. Some children had very full fridges but others did not. It was not evident that the empty fridges were a result of the child not having much food in their fridge or because they did not know what to draw or because they were slow to warm to the task and it took them longer to draw the pictures; however, they were enthusiastic about drawing food items and share personal food preferences and their knowledge of food with peers sitting close by and the researchers who circulated among the children. There was a need to label the pictures in order for the researchers to better understand what it was that the children were drawing.

The cultural diversity of the classes meant that some particular types of food featured in some fridges. For example, Paratha in the fridge of a child whose family had migrated from India. One Aboriginal child had a large jar of vegemite and a bag full of kangaroo tails a reflection of his cultural heritage (Figure 1). Other fridges displayed stored medicine, fresh produce, and ‘fast food’ items (Figure 2).

Theme 2: Inequality and Disadvantage

It was during the third task, when participating in a group discussion, that children expressed some very rich ideas about inequality and disadvantage. The group discussion commenced with a story narrative recounted by one researcher:

Last week two families got paid- it was pay day- and they went to the shops and they spent that money on food for the family- does your family do that? Grocery shopping? [children respond ‘yes’ and ‘no’; another child comments ‘my Mum got paid today- attuned to the concept of ‘pay day’]. One family, after they did their shopping –unpacked their shopping -this is all they had in the fridge [children sigh – that’s not much!] - and the other family had this in their fridge [children respond spontaneously ...wow!!]. So there are two families and two fridges but the fridges look different. Why do they look so different?

When viewing the laminated pictures of the ‘two fridges’ some children said “my fridge looks like that” (pointing to the nearly empty fridge). One child elaborated, explaining that her father lived in another country and that her mother sent all her money to him because the family were trying to raise enough money for him to join them in Australia. This disclosure was later discussed by the classroom teacher in private, she stated that she had ‘no idea’ the child was in this situation. Some children said they knew people (grandmother, aunty etc.) who had an ‘empty’ fridge.

When children looked at the ‘very full’ fridge children they suggested that the money for the food had come from a parent working in the mines (located in remote rural Western Australia). This provided a fascinating window into the socio-cultural context of children in Western Australia where mining is such an important part of the economy (Bronfenbrenner, 1979). Children of Fly-in Fly-Out² (FIFO) mining workers were clearly able to see the connection between working on the mines and having lots of money. One boy informed that his family was going to Bali for a holiday because of the money, \$6000, his father makes as a FIFO mining worker.

As children shared perspectives on why the two fridges presented differently, the quantity not quality of food was discussed. Children also associated a ‘full fridge’ with parents who were good workers. One child commented that some people don’t work because they were unwilling to do what the boss wants and the boss sacked them: alternatively, other people did what the boss wanted and they kept their jobs and were paid. Understanding the relationship between work, money and the capacity to buy food was one that children

² In Western Australia, mines are located in very remote areas. It is most common for miners to live in large cities and work shifts that require them to fly to the site and work for several weeks then fly home, hence the name Fly In, Fly Out.

articulated quite clearly. “The Bank” and “The ATM” were readily identified, however, the children could not answer how the bank sourced its own money: one child saying, “They [adults] just put it in the ATM machine and you get it out on pay day – every Wednesday is pay day”. For some, children’s funds of knowledge (Moll et al., 1992) included knowing when a parent was paid, thus, had money to spend or to save. One child stated, “You may not have much food because you’re saving the money to buy a house” (an Australian phenomenon).

Theme 3: Reason and Rationalisation

As children sought to identify reasons for inequality they spontaneously rationalised that the families ‘lack of food’ was self-inflicted (by not having money, not working hard, misadventure or fate). Some of their explanations include:

The fridge with not much food is because the people ate all the food and there is none left

The robbers took the food

This family is broke (poor), they don’t have much money

The other family (with the full fridge) was hard working

They’re lazy

The mum didn’t buy the food

They might spend the money on toys instead of food

If they don’t work they won’t have money in the bank and then they can’t buy food

Since the time of Aristotle (384 BCE – 322BCE) it has been recognised that the ability to reason and rationalise is central to human cognition and learning. In this project, the children demonstrated proficiency at attempting to solve a problem (lack of food/ limited access to food) using higher order reasoning skills: they were able to solve a novel and hypothetical problem and successfully transferred their knowledge to new situations (Richland, Morrison, & Holyoak, 2006). The children were able to articulate a diverse range of explanations for a family having little food. Some very clear social stereotypes emerge in this discussion such as the role of the mother as the family member responsible for purchasing food and poverty being a result of laziness. These attitudes reflects a similar view to Siraj-Blathchord’s (2008) findings that children hold a view of poverty as being ‘natural’ on the basis of being inferior by race or intellect. These views both reflect and reproduce inequalities and are shown in our study to extend also to personality factors such as laziness or gender, i.e. it is women’s responsibility to provide food for the family. Educators must critically reflect on their own identities and biases in order to challenge these notions and extend children’s understandings to a more inclusive view.

Theme 4: Ingenuity and Empowerment

When asked whether they thought it was fair that some families had a lot of food and some didn’t children overwhelming replied it was “unfair”, and recognised that people without food “would die” or “get sick”. When the researchers asked how people could make things fairer, children were competent and resourceful in their responses (Rinaldi, 2006). Suggestions included sharing food with neighbours, borrowing money, and getting more money out of the bank (when asked if there was always money in the bank some children said ‘yes, you just have to go to the ATM and put the numbers in’). Spontaneous child-initiated comments to support their theories about fairness included “Sharing and caring”, “Share is fair”, “Make some food and share”, and “Take food from one fridge and put it in the other fridge”. Damon (1990) writes about children developing notions of fairness and sharing, and their innate desire to find solutions to social problems. Some children explained how family members were growing vegetables at home and they discussed how this was a good way to have food for a small cost. The children knew about buying seeds and planting them, and a couple of children noted that seeds can be sourced from some fruit when it was eaten; the process of growing vegetables and what plants needed to survive (water, sun, soil) was also described.

The children did not associate 'education' with improved equality of life outcomes, but rather focused on family ingenuity at the time of challenge. An Aboriginal girl in one class reflected on where food could be found in the bush- she was reminded by one of the researchers about a previous discovery of *Bush Onions*- and then in a moment of clarity and recognition she began talking about hunting kangaroos, fishing and recounted a family fishing trip. Other suggestions related to empowerment to access food and showed connections to popular culture and children's funds of knowledge acquired through their lived experiences:

Figure 5: Discussing inequality and 'resourcefulness'

Children identified a number of solutions to poverty and a lack of food. Some of their suggestions included:

Ask for money from another person- ask a friend, mum or dad, go to your neighbours

Save money

Play music and people give you money - busking, you could write songs- Justin Bieber did that!

You can do good tricks- shoot goals with a soccer ball for money

Have a garage sale- sell old toys you want to chuck away then you could get lots of money- like baby toys that you still keep and buy more things that you need

Beyond the economic and social issues related to social justice and the rights of human beings to have access to food, the children also noted the environmental impacts on food provision:

In Egypt there is only sand and camels . It's really hot. The sand is super hot! It's not a good place to grow food.

When children were asked about the whereabouts of people who have little food and where they would live, they identified India, Africa, Malaysia, and Bali (global awareness). The Philippines was also identified following the disaster there recently (Typhon Haiyan). During the discussion children did not identify their own local community or the wider Australian context. While the research literature shows that children are expert in their own lives (Clark, 2004; Cook & Hess, 2007; Moore, McArthur & Noble-Carr, 2008), including matters of poverty (McDonald, 2009), the children in this study did not measure the scale or severity of disadvantage in relation to their own family despite some children openly stating that their fridges or those of family members were empty.

Discussion

It is clear from the responses of the children involved in this study that there are differences in children's appropriation of the status of poverty among children within their own community as well as those in far away places. Children in this study clearly identified children living in poverty in developing countries and despite the admission of some children that they had empty refrigerators at home it seems they did not ascribe poverty to themselves in the same way. Drawing on children's funds of knowledge (Gonzalez, Moll & Armanti, 2005), the study engaged children in a process of depicting and discussing on their own and others access to food and then to reflect on the circumstances of two unnamed families who have too little or plenty in their fridges. At this point in the research children's conceptions of poverty became externalised and their theorising about why revealed an insight into the many layers of their understanding. They made a very early association between work and money and the relationship of this to a family's capacity to provide food. Specific occupations became foregrounded as children drew on their experiences of parents working in high paid jobs in the mining industry and the resultant capacity to have expensive holidays and the like. Other children saw poverty as a phenomenon that occurred only in other developing countries, not at home in Australia. This projection of poverty elsewhere was noted despite the relative poverty of many of the children participating in the discussion (by Australian standards). Children discussed many broad social issues as a result of this conversation about fridges, drawing on their home and community experiences (Skouteris, Edwards, Rutherford, Cutter-

MacKenzie, Huang & O'Connor, 2014) and funds of knowledge (Gonzalez, Moll & Armanti, 2005), offering solutions and explanations and advancing stereotypes they revealed:

- their knowledge of popular culture, 'Justin Bieber' busking for money, or soccer players doing 'tricks' to earn money;
- their willingness to utilise their own resources, selling their old toys to make money to buy food; their notion of fairness in the allocation of resources in the Marxist tradition, taking food from one family who has much and giving it to another who has little;
- the relationship of work and money including the capitalist notion that hard work enables wealth and the inverse, not having a job or losing your job because you are lazy;
- the stereotype that poverty is an individual's problem brought on by a lack of effort;
- the stereotype that mothers are the household members with the main responsibility for providing food

These results confirm Weinger's (2000) earlier notion that prejudices regarding wealth and poverty become entrenched at an early age and that poverty is a topic that can be discussed productively *with* and *by* children, as well as *about* and *for* children (McDonald, 2009). Educators can provoke discussion with children, as we have done in this research, to begin to disrupt some of the stereotypes and misconceptions about poverty, as well as providing an opportunity for children to become protagonists in their own communities to address social inequities. Early years educators are encouraged in this respect by Grieshaber (2008) who suggests that practitioners push the boundaries with young children by offering alternative perspectives, contradictions and inconsistencies. This type of transformative practice is essential if we intend to provide children with the opportunity to engage in the critical and divergent thinking that will define the solutions to global sustainability and peace in future generations (MacNaughton, 2003).

The study provides significant and useful insights into children's theorising around key sustainability issues in the vein of the social sustainability discussed by Siraj-Blatchford (2008). Using a simple set of images the researchers were able to raise questions about global issues affecting children and revealed children's sense of agency as global citizens to affect social justice and the advancement of human rights with regard to the distribution of resources. In this process, children's voices have been documented and shared in the international community to promote their capacity as agents of change Elliott and Davis (2009) for social sustainability.

References

- Agbenyega, J. (2009). The Australian Early Development Index, Who Does It Measure: Piaget or Vygotsky's Child? *Australasian Journal of Early Childhood*, 34 (2) 31-38.
- Australian Curriculum, Assessment and Reporting Authority (2014). *The Australian Curriculum*. Retrieved from <http://www.australiancurriculum.edu.au>, 24th November, 14.
- Australian Early Development Census (2012). *Community profile*. Retrieved from <http://www.aedc.gov.au/data/data-explorer?id=47319> 10th November, 14.
- Australian Government (2009). *Belonging, being and becoming: The early years learning framework for Australia*. Canberra: Commonwealth of Australia; Department of Education, Employment and Workplace Relations.
- Australian Institute of Health and Welfare (2012). *Australia's food and nutrition 2012*. Canberra: Commonwealth of Australia.
- Australian International Food Security Research Centre (2015). *Food security and why it matters*. Retrieved from <http://aciarc.gov.au/aifsc/food-security-and-why-it-matters> 9th March, 2015.
- Barbour, C., Barbour, N., & Scully, P. (2011). *Families, schools and communities: Building partnerships for educating children*. Upper Saddle River, NJ: Pearson.
- Bowes, J., Watson, J., & Pearson, E. (2009). Contexts and consequences: Impacts on children, families and communities. In J. Bowes & R. Grace. (Eds.), *Children families and communities: Contexts and consequences* (pp. 91-111). South Melbourne, Vic: Oxford University Press.
- Bronfenbrenner, U. (1979). *The Ecology of Human Development: Experiments by Nature and Design*. Cambridge, MA: Harvard University Press.
- Burns, C. (2004). *A review of the literature describing the link between poverty, food insecurity and obesity with specific reference to Australia*. Melbourne: Victorian Health Promotion Foundation.
- Clark, A., & Moss, P. (2011). *Listening to young children: The Mosaic Approach*. 2nd Ed. London: NCB.
- Cook, T., & Hess, E. (2007). What the camera sees and from whose perspective: Fun methodologies for engaging children in enlightening adults. *Childhood*, 14, 29.
- Creswell, J. W. (1998). *Qualitative inquiry and research design: Choosing among five designs*. Thousand Oaks, CA: Sage.
- Creswell, J. (2013). *Qualitative Inquiry & Research Design: Choosing Among Five Approaches*. Thousand Oaks, California: Sage.
- Damon, W. (1990). *The Moral Child: Nurturing children's natural moral growth*. New York: The Free Press.
- Davis, J. (2008). What might education for sustainability look like in early childhood? In I. Pramling Samuelsson & Y. Kaga (Eds.), *The contribution of early childhood education to a sustainable society* (pp. 18-24). Paris: UNESCO.

- Department of Education of Western Australia (2014). Schools online: School overview. Retrieved from http://www.det.wa.edu.au/schoolsonline/main_page.do 10th November, 14.
- Elliott, S. & Davis, J. (2009). Exploring the resistance: An Australian perspective on educating for sustainability in early childhood. *International Journal of Early Childhood*, 41(2), 65-79.
- Erickson, F. (1986). Qualitative methods in research on teaching. In C. Wittrock (Ed.), *Handbook for research on teaching*. New York: Macmillan.
- European Panel on Sustainable Development (2014). European Panel on Sustainable Development. Retrieved from <http://gmv.gu.se/english/collaborations-and-projects/collaboration-with-industry-and-society/european-panel-on-sustainable-development--epsd> 9th March, 2015
- Feather, N. (1974) *Explanations of poverty in Australian and American samples: The person, society and fate?* *Australian Journal of Psychology*, 26, 119–126
- Food and Agriculture Organization of the United Nations (1996). *Rome Declaration on World Food Security: the special program for food security*. Retrieved from <http://www.fao.org/docrep/003/w3613e/w3613e00.HTM> 9th March
- Flick, U. (2007). *Managing Quality in Qualitative Research*. London: Sage.
- Grieshaber, S. (2008). Interrupting stereotypes: Teaching and the education of young children. *Early Education and Development* 19 (3), 505-518.
- Gonzalez, N., Moll, L. & Amanti, C. (2005). *Funds of knowledge: Theorising Practices in households, communities and classrooms*. New Jersey: Taylor and Francis.
- Hagglund, S., & Pramling Samuelsson, I. (2009). *International Journal of Early Childhood*, 41(2), 49-63.
- Hsieh, H. F., & Shannon, S. E. (2005). Three approaches to qualitative content analysis. *Qualitative Health Research*, 15(9), 1277-1288.
- James, A. & Prout, A. (1997). *Constructing and reconstructing childhood* (2nd ed.). London: Falmer Press.
- James, A., Jenks, C., & Prout, A. (1998) *Theorising childhood*. Cambridge: Polity Press.
- Jenks, C. (2005). *Childhood* (2nd ed.). New York: Routledge.
- Kellett, M. (2005). *Children as active researchers: A new paradigm for the 21st century?* Economic and Social Research Council [ESRC] National Centre for Research Methods. Methods Review Papers NCRM/003. Retrieved from: <http://eprints.ncrm.ac.uk/87/1/MethodsReviewPaperNCRM-003.pdf>
- Lather, P. (1991). *Feminist research in education: with/against*. Geelong: Deakin University Press.
- Mac Naughton, G. (2003). *Shaping early childhood: Learners, curriculum and contexts*. City/Place?: McGraw-Hill International.
- McDonald, C. (2009) Children and poverty: Why their experience of their lives matter for policy. *Australian Journal of Social Issues*, 44(1).

- Moll, L. C., Amanti, C., Neff, D., & González, N. (1992). Funds of knowledge for teaching: Using a qualitative approach to connect homes and classrooms. *Theory into Practice*, 31(2), 132-141.
- Moore, T., McArthur, M., & Noble-Carr, D. (2008). Little voices and big ideas: Lessons learned from children about research. *International Journal of Qualitative Methods*, 7(2), 77-91.
- Ottosson, P. & Samuelsson, B. (2008). *The Gothenburg recommendations on education for sustainable development, City/Place?* Centre for Environment and Sustainability.
- OMEP (2014). *OMEP's World Project 2013-14: Equality for Sustainability*. Retrieved from <http://www.worldomep.org/en/equality-for-sustainability/> 10th November, 2014.
- Patton, M. Q. (2002). *Qualitative Research & Evaluation Methods* (3rd ed.). London: Sage.
- Pramling Samuelson, I. & Kaga, Y. (2008). *The contribution of early childhood education to a sustainable society*. Paris: UNESCO.
- Richland, L. E., Morrison, R. G., & Holyoak, K. J. (2006). Children's development of analogical reasoning: Insights from scene analogy problems. *Journal of Experimental Child Psychology*, 94, 249-273.
- Rinaldi, C. (2006). *In dialogue with Reggio Emilia*. New York: Routledge.
- Rogoff, B. (1990). *Apprenticeship in thinking: Cognitive development in social context*. Oxford University Press.
- Siraj-Blatchford, J. (2008). The implications of early understandings of inequality, science and technology for the development of sustainable societies. In I.Pramling Samuelson & Y. Kaga (Eds.) *The contribution of early childhood education to a sustainable society* (pp. 67-72). Paris: UNESCO (2008).
- Siraj-Blatchford, J. (2009). Editorial: Education for sustainable development in early childhood. *International Journal of Early Childhood*, 41(2), 9-21.
- Skouteris, H., Edwards, S., Rutherford, L., Cutter-MacKenzie, A. Huang, T., & O'Connor, A. (2014). Promoting healthy eating, active play and sustainability consciousness in early childhood curricula, addressing the Ben 10 problem: A randomised control trial. *BMC Public Health*, 14:548. doi:10.1186/1471-2458-14-548. Retrieved from: <http://www.biomedcentral.com/1471-2458/14/548>
- Stake, R. E. (1994). Case studies. In N. K. Denzin & Y. S. Lincoln (Eds.), *Handbook of qualitative research* (pp. 236-247). Thousand Oaks CA: Sage.
- Stake, R. E. (2004). Qualitative case studies. In N. K. Denzin & Y. S. Lincoln (Eds.), *The Sage handbook of qualitative research*. Thousand Oak, CA: Sage.
- UNESCO (2008). *The contribution of early childhood education to a sustainable society*. I.Pramling Samuelson & Y. Kaga (Eds.). Paris: UNESCO.
- UNESCO (2014). Education for sustainable development. Retrieved from <http://www.unesco.org/new/en/education/themes/leading-the-international-agenda/education-for-sustainable-development/> 18th December, 2014.
- United Nations (1990). *United nations convention on the rights of the child*. Geneva: Office of the United Nations High Commissioner for Human Rights (OHCHR)

Vygotsky, L. S. (1980). *Mind in society: The development of higher psychological processes*. Harvard: Harvard University Press.

World Health Organisation (2015). *Food security*. Retrieved from <http://www.who.int/trade/glossary/story028/en/> 9th March, 2015.

Yin, R. K. (1989). *Case study research: Design and methods*. Newbury Park, CA: Sage.

Yin, R. K. (2012). *Applications of case study research*. Thousand Oaks, California: Sage.

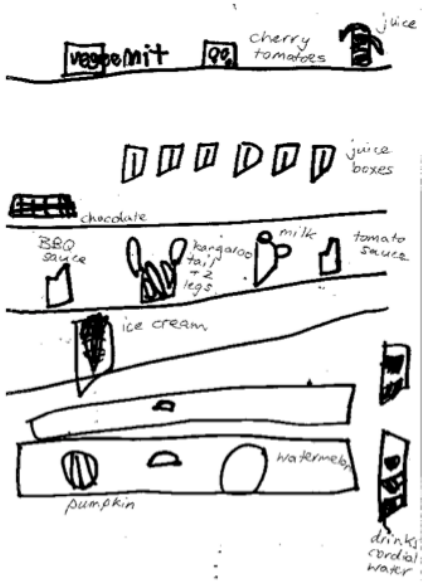


Figure 1. Kangaroo tails and vegemite

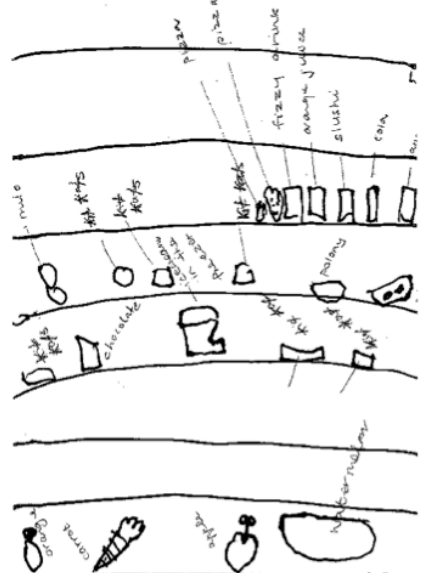


Figure 2. Fast food, soft drink and chocolate bars