Community understandings of sustainability in the MDB: implications for curriculum & pedagogy.

Project: Towards Place-Based Education in the Murray-Darling Basin

(MDBFutures CRN & MDBA)

Conflicting values

What happens when the message sent by the school system clashes with the values & understandings of the community?

‘I was bailed up on the main street, with people all around, and absolutely abused by a student's father because of the greenie bullshit I was apparently teaching his son. He was absolutely wild, I thought he was going to punch me.’

Curriculum ‘relevance’ or ‘acceptability’?

Somerville & Green (2013):

‘the most exciting and innovative sustainability education initiatives are emerging at the grassroots community level, but do not appear in the formal curriculum of school education’ p. 73.

‘They typically involve place and community-based [outside of the classroom student centered learning] shaped within and by the communities and places in which they arise’ p. 74

Green & Reid (2004)

- Relationship between education and rural-regional sustainability.
- Education as situated practice.
Brundtland Report (1987)

• Called for “a vast campaign of education, debate, and public participation” to address the challenges of sustainability in the future (World Commission on Environment and Development, 1987 p.23.).
World summit on sustainable development (2002)

• Recognised the indispensable role of education for achieving sustainable development.

• As education is “one of the most powerful instruments we have for bringing about the changes required to achieve sustainable development” (UNESCO, 2005)

• Declaring a UN Decade of Education for Sustainable Development (began in January 2005)
Complex environments

• “scholarly and public debate on agricultural water is characterized by strong polarization and dichotomies” (Mollinga, 2010, p. 415)

• “the pursuit of sustainable development is more than just reconciling potential conflicts between economic growth and ecological sustainability; there is a social dimension to sustainability” (Mitchell, Curtis and Davidson, 2008, p. 67)

• Aboriginal Australians “look at Country as everything all living together ... everything’s got order and connection” (Walsh et al. 2014, p 84);

• There is no division but connectedness (Weir, 2009)
Triple Bottom Line (TBL)

- **Economic bottom line**: (growth, efficiency, stability) financial capital of an organisation; physical capital (machinery, equipment etc.) human capital (skills, experience, knowledge in the organisation). Sustainability revolves around cost competitiveness and future projections, demand, profit margins, maintenance of human capital.

- **Environmental bottom line**: (biodiversity, resilience, natural resources, pollution) critical natural capital essential to the maintenance of life and ecosystem integrity and renewable, replaceable, or substitutable natural capital.

- **Social bottom line**: (empowerment, inclusion, consultation, governance) focuses on social capital and human capital.
Sustainability

• Not Stasis
• sustainability involves change and progress, an engagement with a range of capitals, and a delicate balancing of priorities
• transformation of communities
• implicated with the development of community capitals, defined as; natural, human, social, institutional and produced
  – Cocklin and Dibdin (2005)
Green 2010

• Education & Rural-Regional Sustainability
• ‘might a reconceptualised view of curriculum and schooling connect with the regeneration of spaces and places?’ (p.1).
• human social systems are at once ecological, cultural and semiotic in character.
• Then link to place-conscious education.
Project data

Phase 1
• Analysis of State & National Curriculum documents
• Analysis of State & National policy documents
• Online Survey.
• Respondents: Community organisations (Service clubs, Councils, Agricultural cooperatives)
• Survey of community understandings of sustainability, issues and approaches.
• Schools Survey

Phase 2
• Community curriculum cycle (not reported here)
Sustainability addresses the ongoing capacity of Earth to maintain all life. Sustainable patterns of living meet the needs of the present without compromising the ability of future generations to meet their needs. Actions to improve sustainability are both individual and collective endeavours shared across local and global communities. They necessitate a renewed and balanced approach to the way humans interact with each other and the environment.

(Australian Curriculum, Assessment and Reporting Authority (ACARA), 2014, n.p.).
Sustainability in the Curriculum:

When linked to content elaborations there is a bias towards sustainability being seen in predominantly environmental terms.

The implied definition of sustainability is one of environmental issues and focuses.

This is evident in the context sustainability is to be enacted (taught), the subjects it is taught in, and the different elements of sustainability that are taught and focused on.

Sustainability in (education & schools) Policy:

The Environmental focus of sustainability is also evident in the policies of each jurisdiction - School specific policies, Departmental policies.

While policies used mixed / TBL influenced definitions the actions and specifics were linked primarily to environmental foci.
<table>
<thead>
<tr>
<th>Jurisdiction</th>
<th>Number of times sustainability is referenced</th>
<th>Number of times environmental only</th>
<th>Number of times other &amp; environmental</th>
<th>Number of times other only</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australian Curriculum</td>
<td>50</td>
<td>15</td>
<td>12</td>
<td>23*</td>
</tr>
<tr>
<td>NSW</td>
<td>107</td>
<td>72</td>
<td>11</td>
<td>24</td>
</tr>
<tr>
<td>QLD</td>
<td>23</td>
<td>8</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>VIC</td>
<td>33</td>
<td>18</td>
<td>8</td>
<td>7</td>
</tr>
<tr>
<td>SA</td>
<td>203</td>
<td>97</td>
<td>67</td>
<td>39</td>
</tr>
<tr>
<td>ACT</td>
<td>The ACT K-10 curriculum framework is has a whole ‘Essential Learning Achievement’ dedicated to environmental sustainability. Additionally where this is linked to the Australian Curriculum it is environmental in orientation.**</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table Three: Sustainability in the Curriculum of the Jurisdictions within the MDB.
* This result is skewed by 21 references in ‘Technology’, which has a particular usage¹.
** The ACT K-10 curriculum is organised around ‘Essential Learning Achievements’ rather than a specific subject orientated curriculum. This has subsequently been mapped to the Australian Curriculum
Q1: Sustainability means different things to different people. What does sustainability mean to you?

1. A ‘future orientated’ concept. While including the traditional view of maintain the environment and resources for future generations there was a semantic orientation towards the future.

2. ‘Integrated approach’ - emphasized the interconnected nature of the environment, the economy, people and communities (no time reference)

3. ‘Environmental maintenance’ - focused on environmental maintenance (no time reference)

• Farm specific perspectives of sustainability fell outside of these first three categories. Positively this suggests that farming practices may be considered part of the broader environment as opposed to a narrower farm specific or land perspective.
Q1: Sustainability means different things to different people. What does sustainability mean to you? *(Schools)*

1. Environment focused - minimise our impact, maintain, and improve the environment for future generations and future needs
2. Resource focused - ensure we minimise usage for the long term availability and for future generations.
3. Long term viability and maintenance for future generations

• TBL focus only a very small number mention this, compared to community responses
Community Understandings of the Importance of Sustainability

- Not much
- Neutral
- Very

How important is sustainability to you? How important is sustainability to your organisation?
Schools Understandings of the Importance of Sustainability

How important is sustainability to you?
How important is sustainability to your organisation?
Individuals V Organisations

How important is sustainability to you?

1. ‘future orientated’ - future generations, lifestyle and resources.
2. ‘sustainability of resources’
3. personal ‘values and beliefs’
4. Farm and business survival

How important is sustainability to your organisation?

1. ‘survival’ of the organization and the communities they serve
2. ‘integrated perspective’ in that the responses highlighted the organizations need to balance various aspects of sustainability
3. ‘Environmental’ reasons
4. Agricultural’ specific (food production)
<table>
<thead>
<tr>
<th><strong>Individuals V Schools</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>How important is sustainability to you?</strong></td>
</tr>
<tr>
<td>1. ‘Future oriented’-future generations, availability of resources in future.</td>
</tr>
<tr>
<td>2.’Environmental’-it’s under threat, earth and human survival.</td>
</tr>
<tr>
<td>3. ‘Resources’-finite resources.</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>
The importance of each area of sustainability in achieving your organisation's sustainability goals.
The importance of each area of sustainability in achieving your organisation's (schools) sustainability goals.

Mean with +/- 2se
Sustainability means different things to different people. What does sustainability mean to you?

1. A ‘future orientated’ concept.
2. ‘Integrated approach’
3. ‘Environmental maintenance’

How can we address future challenges?

1. Education & awareness (educate the community & in schools)
2. Finance
3. Government (commitment, funding, qualified people)
Sustainability means different things to different people. What does sustainability mean to you? *(schools)*

1. ‘Environmentally focused’
2. ‘Resource focused’
3. ‘long term/future’ oriented

How can we address future challenges? *(schools)*

1. Financial *(grants, easier funding, more funding, government funding)*
2. Education and awareness *(access to information, professional learning, focus areas, partnerships)*

- Governance and policy
- *(leadership, curriculum changes, policy)*
Q7: What activities is your organisation undertaking in relation to sustainability?

1. ‘Environmental’ programs
2. ‘Education & public awareness’ initiatives
3. Targeted ‘reduction of resource use’

- ‘cultural/social’ programs and ‘lobbying’ both received minor mentions.
Q7: What activities is your school undertaking in relation to sustainability?

1. Resource reduction
2. Environmental programs
3. Education

- Community and social sustainability activities received minimal mentions
• Thus far we have NOT defined ‘sustainability’
• The results illustrate the multifaceted perceptive in use within community organisations.
• Students are growing up in communities with more complex and nuanced understandings of sustainability than that presented in the curriculum.

• Next we introduce Triple Bottom Line ideas...
Q9: What percentage of the available resources do you feel should be allocated to each area of sustainability?

<table>
<thead>
<tr>
<th>#</th>
<th>Answer</th>
<th>Min Value</th>
<th>Max Value</th>
<th>Average Value</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Environmental</td>
<td>0.00</td>
<td>100.00</td>
<td>33.98</td>
<td>18.55</td>
</tr>
<tr>
<td>2</td>
<td>Economic</td>
<td>0.00</td>
<td>100.00</td>
<td>26.05</td>
<td>15.88</td>
</tr>
<tr>
<td>3</td>
<td>Social</td>
<td>0.00</td>
<td>60.00</td>
<td>20.92</td>
<td>10.66</td>
</tr>
<tr>
<td>4</td>
<td>Cultural</td>
<td>0.00</td>
<td>45.00</td>
<td>14.67</td>
<td>9.09</td>
</tr>
<tr>
<td>5</td>
<td>Other (Please specify)</td>
<td>0.00</td>
<td>100.00</td>
<td>5.11</td>
<td>16.24</td>
</tr>
</tbody>
</table>
Q9: What percentage of the available resources do you feel should be allocated to each area of sustainability (schools)

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<th>Answer</th>
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<th>Average Value</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Environmental</td>
<td>0.00</td>
<td>97.00</td>
<td>40.47</td>
<td>20.17</td>
</tr>
<tr>
<td>2</td>
<td>Economic</td>
<td>0.00</td>
<td>50.00</td>
<td>22.14</td>
<td>14.54</td>
</tr>
<tr>
<td>3</td>
<td>Social</td>
<td>0.00</td>
<td>50.00</td>
<td>16.84</td>
<td>10.41</td>
</tr>
<tr>
<td>4</td>
<td>Cultural</td>
<td>0.00</td>
<td>50.00</td>
<td>15.56</td>
<td>11.86</td>
</tr>
<tr>
<td>5</td>
<td>Other (Please specify)</td>
<td>0.00</td>
<td>100.00</td>
<td>5.00</td>
<td>18.29</td>
</tr>
</tbody>
</table>
Challenges facing organisations in achieving sustainability goals.

<table>
<thead>
<tr>
<th>Rank</th>
<th>Priority 1</th>
<th>Priority 2</th>
<th>Priority 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Financial (funding &amp; operating costs)</td>
<td>Financial (funding &amp; operating costs)</td>
<td>Organisational (culture, change, competing values within)</td>
</tr>
<tr>
<td>2</td>
<td>Human Resources (small numbers, ageing members)</td>
<td>Attitudes &amp; Understandings (lack of understanding of the issue, lack of interest)</td>
<td>Education &amp; awareness (not enough knowledge about issues)</td>
</tr>
<tr>
<td>3</td>
<td>Attitudes (prevailing anti-sustainability views)</td>
<td>Organisational issues (leadership, viability of organisation itself)</td>
<td>Human resources (people leaving areas)</td>
</tr>
<tr>
<td>4</td>
<td>Government (mainly local government policy &amp; priorities)</td>
<td>Human Resources (difficulty attracting members, volunteers)</td>
<td>Government (policy &amp; regulation)</td>
</tr>
</tbody>
</table>
Challenges facing schools in achieving sustainability goals

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<th>Priority 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Financial <em>(funding, budgets, costs)</em></td>
<td>Community support, attitudes and understanding <em>(gaining community support, awareness, attitudes, working together)</em></td>
<td>No answer</td>
</tr>
<tr>
<td>2</td>
<td>Time <em>(staff, curriculum)</em></td>
<td>Financial <em>(budget, costs, funding)</em></td>
<td>Resources <em>(time, financial, human resources, expertise)</em></td>
</tr>
<tr>
<td>3</td>
<td>Attitudes <em>(apathy, reluctance to change, misconceptions)</em></td>
<td>Attitudes and understanding <em>(apathy, understanding, misinformation, experience)</em></td>
<td>Staff knowledge <em>(staff expertise &amp; education, access to information)</em></td>
</tr>
<tr>
<td>4</td>
<td>Policy and school priorities <em>(school outcomes, curriculum requirements, department priorities, changes)</em></td>
<td>Time</td>
<td>Policy/governance/ political <em>(political changes, leadership, lack of support implementing policy, red tape)</em></td>
</tr>
</tbody>
</table>
Suggestions for addressing the challenges outlined

<table>
<thead>
<tr>
<th>Rank</th>
<th>Priority 1</th>
<th>Priority 2</th>
<th>Priority 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Education &amp; awareness <em>educate community &amp; in schools</em></td>
<td>Education <em>(educate the community about the issues and approaches)</em></td>
<td>Financial <em>(grants too hard, more of, better use, promote financial benefits)</em></td>
</tr>
<tr>
<td>2</td>
<td>Financial <em>(funding, financial management and fundraising)</em></td>
<td>Financial <em>(greater resources)</em></td>
<td>Education <em>(school, community, new qualifications to reflect what is needed)</em></td>
</tr>
<tr>
<td>3</td>
<td>Government <em>(commitment, funding, qualified people)</em></td>
<td>Government <em>(lobbying, policy, less interference)</em></td>
<td>Government <em>(need politicians who understand)</em></td>
</tr>
<tr>
<td>4</td>
<td>Too hard</td>
<td>Landholders &amp; businesses <em>(support &amp; work with them)</em></td>
<td>Collaboration <em>(more community involvement less individualistic)</em></td>
</tr>
</tbody>
</table>
## Suggestions for addressing the challenges outlined (schools)

<table>
<thead>
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<th>Priority 1</th>
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</tr>
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<tbody>
<tr>
<td>1</td>
<td>Financial <em>(grants, easier funding, more funding, government funding)</em></td>
<td>Change school education approach <em>(curriculum issues, teaching time, lesson strategies)</em></td>
<td>No answer</td>
</tr>
<tr>
<td>2</td>
<td>Education and awareness <em>(access to information, professional learning, focus areas, partnerships)</em></td>
<td>Community related strategies <em>(community involvement, community focused projects, community input)</em></td>
<td>Education <em>(community, students, staff, curriculum links, expert input)</em></td>
</tr>
<tr>
<td>3</td>
<td>Governance and policy <em>(leadership, curriculum changes, policy)</em></td>
<td>Resources</td>
<td>Community involvement <em>(organisational support, stakeholder involvement, joint initiatives, volunteers)</em></td>
</tr>
<tr>
<td>4</td>
<td>Time and staffing <em>(volunteers, time allocation, teacher workload)</em></td>
<td>Financial <em>(funding, donations)</em></td>
<td>Government or Organisational issues <em>(planning, priorities, commitment)</em></td>
</tr>
</tbody>
</table>
Difference between communities & schools

- School responses focus very strongly on the environment perspective.
- Whereas community responses are very much aligned to a TBL perspective.
- Schools responses are closely aligned with the perspective dominant in the enacted curriculum and policy.
- Communities want education about the broad issue using a TBL approach, schools want to educate about environmental concerns.
How do we bridge this divide?
Sustainability

• Not Stasis
• sustainability involves change and progress, an engagement with a range of capitals, and a delicate balancing of priorities
• transformation of communities
• implicated with the development of community capitals, defined as; natural, human, social, institutional and produced
  – Cocklin and Dibdin (2005)
Green 2010

• Education & Rural-Regional Sustainability
• ‘might a reconceptualised view of curriculum and schooling connect with the regeneration of spaces and places?’ (p.1).
• human social systems are at once ecological, cultural and semiotic in character.
• Then link to place-conscious education.
A Place Conscious enactment

• A question of direction
• Generative from place, connected to the global
• Generative from place, connected to abstract knowledge
• Not parochial or relativistic.
• Take students beyond their world while leaving that world intact and valued. Show communities other futures that *include* them.
A Place Conscious enactment

This is not to suggest that schools should only reflect the attitudes of their communities, though; indeed, there is a legitimate role in developing new understandings. Instead, we are arguing that in order to develop new understands and effectively problem-solve, education programs need to start with shared understandings.

‘public pedagogy’

• “Such interventions not only raise political questions about what it means for spaces and places to be public, which is particularly important against the backdrop concerns about the decline of the public sphere and the end of public space...They also raise questions about what it means to contribute to the reinvigoration of the public quality of space and places through such interventions”

  • (Biesta, 2012, p. 684).
Mainstream schools that build on local knowledge rather than generic knowledge makes curriculum relevant to students in the local school and builds individual and community pride and engagement that can lead to deeper understandings, learnings and build closer ties across the community.
Further information

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References


