Differentiating pathways: why they are not all the same

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Link to the Australian work

- Vocations: the link between post-compulsory education and the labour market
- [https://goo.gl/QaZHWb](https://goo.gl/QaZHWb)

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Argument

- Policy assumes:
  - Linear pathways from lower to higher credentials in same field
  - Credentials are linked to specific jobs
  - Pathways support social mobility
- Problems with each assumption
- Need to understand how credentials are linked to labour market & how this shapes pathways & how structure of education sectors helps shape social mobility
- Need a broader understanding of purpose of credentials
Overview

- Similarities & differences between Canada & Australia
- Key policy assumptions
- What actually happens
  - Educational pathways
  - Occupational pathways
  - Social mobility
- Why it happens
- Implications for policy

In common

- Both vast countries
- Members of the Commonwealth
- Westminster parliamentary systems
- Federations
- Liberal market economies
- Colonial dispossession of Indigenous peoples
- Immigrant & multicultural
- Population lives on borders
Differences

Australia’s climate in January 2013

Australian Government
Bureau of Meteorology

AWAP Highest Max. Temp. (°C)
01/01/2013 to 14/01/2013
Product of the National Climate Centre

http://www.bom.gov.au
Structure of sectors

Canada
• Higher education sector
  – Universities & colleges
  – Comprehensive universities, broad liberal arts degrees
  – Colleges relatively rich curriculum
  – Colleges quite strong
  – Very small private sector overall
  – A bit messy, a bit blurry
  – More distinction between provinces
  – Pathways & transition constrained

Australia
• Tertiary education sector
  – Higher education (mainly universities) & vocational education (includes TAFE)
  – Comprehensive universities, more vocationally focused degrees
  – TAFE must use crappy curriculum
  – TAFE been savaged, but still main public institution
  – Small private sector in HE, huge private sector in VET
  – Very messy, very blurry
  – Less distinction between states
  – More pathways

Similar issues

Skills mismatches, while more people than ever have credentials
Weak occupational & educational pathways
Weak links between credentials and jobs
Similar characteristics

Liberal market economy

Pathways differ by FoE & industry

Key distinguishing feature - regulated or unregulated

Most occupations unregulated

What most governments want

More qualifications = high-skilled workforce

Align educational outcomes with national economic goals

Maximize credits for prior learning

Promote access, equity, and social inclusion
What policy assumes happens

Different ways of theorising pathways

**Human capital**
- Rational investment in the self

**Liberal**
- Social mobility
- Meritocracy & opportunity

**Social reproduction theory**
- Challenge elite power structures
What happens

Educational pathways

Sector-to-sector student mobility, Ontario (Extracted from National Graduate Survey (NGS) 2013)

- University to University: 28%
- University to College: 23%
- College to University: 23%
- College to College: 26%

2010-11 cohort
Assumed student mobility - Ontario

Actual student mobility, Ontario
Australia & Canada:
Pathways within FoE by sector
Australia & Canada: Pathways within FoE by sector

Who stays in their field?

Canada: % graduates with prior qualification & % with prior qualification in same FoE
National Household Survey 2011
Canadians with prior Canadian PSE credentials

- Trades qualifications only
- College qualifications only
- Both trades and college qualifications, no university qualifications

- University certificate below bachelor level and trades and/or college qualifications
- Bachelor’s degree and trades and/or college qualifications
- University qualification above bachelor level and trades and/or college qualifications

- University certificate below bachelor level only
- Bachelor’s degree, no trade or college qualifications
- University qualification above bachelor level, no trade or college qualifications

Canada leads world for PSE because of college credentials

Proportion of people over 15 years with a postsecondary qualification by combination of qualification, Canada

- University qualifications only: 25%
- Combination of College/Trades and University qualifications: 54%
- College/Trades qualifications only: 21%
What happens

Occupational pathways

% of graduates over 15 years industry sector’s employment by qualification combination

- Health care and social assistance
- Educational services
- Professional, scientific and technical services
- Public administration
- Retail trade
- Manufacturing
- Construction
- Finance and insurance
- Other services (except public administration)
- Accommodation and food services
- Wholesale trade
- Transportation and warehousing
- Administrative and support
- Information industries
- Real estate
- Arts and entertainment
- Agriculture
- Mining
- Utilities
- Management
Canada: ‘How closely is the (main) job you held last week related to your certificate, diploma or degree?’

<table>
<thead>
<tr>
<th>Sub field</th>
<th>Related to job</th>
</tr>
</thead>
<tbody>
<tr>
<td>Registered nurse</td>
<td>2.9</td>
</tr>
<tr>
<td>Engineer</td>
<td>2.6</td>
</tr>
<tr>
<td>Business</td>
<td>2.4</td>
</tr>
<tr>
<td>Technician</td>
<td>2.4</td>
</tr>
<tr>
<td>Humanities</td>
<td>1.9</td>
</tr>
<tr>
<td>Physical and life sciences</td>
<td>2.1</td>
</tr>
</tbody>
</table>

Not related at all = 1
Somewhat related = 2
Closely related = 3


Canada ‘When you were selected for this job, what level of education was needed to get the job?’

<table>
<thead>
<tr>
<th>Sub field</th>
<th>Level of education needed for job</th>
</tr>
</thead>
<tbody>
<tr>
<td>Registered nurse</td>
<td>1.2</td>
</tr>
<tr>
<td>Engineer</td>
<td>1.2</td>
</tr>
<tr>
<td>Business</td>
<td>1.5</td>
</tr>
<tr>
<td>Technician</td>
<td>1.8</td>
</tr>
<tr>
<td>Humanities</td>
<td>1.6</td>
</tr>
<tr>
<td>Physical and life sciences</td>
<td>1.4</td>
</tr>
</tbody>
</table>

Graduate had less than that required = -1
Graduate had same as that required = 1
Graduate had more than that required = 2
No educational requirement specified = 3

What happens

Social mobility

<table>
<thead>
<tr>
<th>Skill level</th>
<th>Education requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skill Level A Managers</td>
<td>None</td>
</tr>
<tr>
<td>Skill Level A Professionals</td>
<td>Usually university</td>
</tr>
<tr>
<td>Skill Level B</td>
<td>Usually college education or apprenticeship training</td>
</tr>
<tr>
<td>Skill Level C</td>
<td>Usually secondary and/or occupation specific training</td>
</tr>
<tr>
<td>Skill Level D</td>
<td>Usually on the job training</td>
</tr>
</tbody>
</table>
Proportion of graduates over 15 years by skill level

<table>
<thead>
<tr>
<th>Skill level</th>
<th>Col/trades only</th>
<th>Col/trades and Uni</th>
<th>Uni only</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skill level A Managers</td>
<td>7.5%</td>
<td>11.2%</td>
<td>12.0%</td>
<td>9.4%</td>
</tr>
<tr>
<td>Skill level A Professionals</td>
<td>7.2%</td>
<td>33.7%</td>
<td>40.1%</td>
<td>21.1%</td>
</tr>
<tr>
<td>Skill level B College or apprenticeship training</td>
<td>35.4%</td>
<td>21.0%</td>
<td>14.8%</td>
<td>27.1%</td>
</tr>
<tr>
<td>Skill level C High school or job-specific training</td>
<td>22.1%</td>
<td>13.7%</td>
<td>11.1%</td>
<td>17.5%</td>
</tr>
<tr>
<td>Skill level D On-the-job training</td>
<td>6.2%</td>
<td>3.2%</td>
<td>2.8%</td>
<td>4.7%</td>
</tr>
<tr>
<td>Did not work in 2010 or 2011</td>
<td>21.7%</td>
<td>17.2%</td>
<td>19.2%</td>
<td>20.1%</td>
</tr>
<tr>
<td>Skill level</td>
<td>A Managers</td>
<td>A Professionals</td>
<td>B College or apprenticeship training</td>
<td>C High school or job-specific training</td>
</tr>
<tr>
<td>-------------</td>
<td>------------</td>
<td>----------------</td>
<td>------------------------------------</td>
<td>----------------------------------------</td>
</tr>
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<td>35.4%</td>
<td>22.1%</td>
</tr>
<tr>
<td>Col/trades and Uni</td>
<td>11.2%</td>
<td>40.1%</td>
<td>21.0%</td>
<td>13.7%</td>
</tr>
<tr>
<td>Uni only</td>
<td>12.0%</td>
<td>14.8%</td>
<td>14.8%</td>
<td>11.1%</td>
</tr>
<tr>
<td>Total</td>
<td>9.4%</td>
<td>21.1%</td>
<td>27.1%</td>
<td>17.5%</td>
</tr>
</tbody>
</table>

Grand Total | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |

% of graduates over 15 occupations skill level categories by qualifications combinations

- **Skill level A Managers**
- **Skill level A Professionals**
- **Skill level B College or apprenticeship training**
- **Skill level C High school or job-specific training**
- **Skill level D On-the-job training**
- **Did not work in 2010 or 2011**

- College qualifications only
- Combination of College and University qualifications
- University qualifications only
Proportion of each income decile, graduates over 15 years, Canada

<table>
<thead>
<tr>
<th>Decile</th>
<th>Col/trades only</th>
<th>Col/trades and Uni</th>
<th>Uni only</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highest decile</td>
<td>9.0%</td>
<td>16.3%</td>
<td>23.9%</td>
<td>14.3%</td>
</tr>
<tr>
<td>Ninth decile</td>
<td>10.8%</td>
<td>14.3%</td>
<td>15.9%</td>
<td>12.8%</td>
</tr>
<tr>
<td>Eighth decile</td>
<td>11.2%</td>
<td>12.6%</td>
<td>12.1%</td>
<td>11.7%</td>
</tr>
<tr>
<td>Seventh decile</td>
<td>11.3%</td>
<td>11.1%</td>
<td>9.7%</td>
<td>10.9%</td>
</tr>
<tr>
<td>Sixth decile</td>
<td>11.2%</td>
<td>9.7%</td>
<td>8.0%</td>
<td>10.1%</td>
</tr>
<tr>
<td>Fifth decile</td>
<td>10.8%</td>
<td>8.5%</td>
<td>6.8%</td>
<td>9.3%</td>
</tr>
<tr>
<td>Fourth decile</td>
<td>10.3%</td>
<td>7.2%</td>
<td>5.7%</td>
<td>8.5%</td>
</tr>
<tr>
<td>Third decile</td>
<td>9.2%</td>
<td>6.4%</td>
<td>5.1%</td>
<td>7.6%</td>
</tr>
<tr>
<td>Second decile</td>
<td>8.1%</td>
<td>6.0%</td>
<td>5.3%</td>
<td>7.0%</td>
</tr>
<tr>
<td>Lowest decile</td>
<td>8.0%</td>
<td>8.0%</td>
<td>7.5%</td>
<td>7.9%</td>
</tr>
<tr>
<td>Grand total</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
<td></td>
</tr>
<tr>
<td>Decile</td>
<td>Col/trades only</td>
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<td>----------------</td>
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<tr>
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<td>12.6%</td>
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<td>11.7%</td>
</tr>
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<tr>
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<td>11.2%</td>
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<td>5.1%</td>
<td>7.6%</td>
</tr>
<tr>
<td>Second</td>
<td>8.1%</td>
<td>6.0%</td>
<td>5.3%</td>
<td>7.0%</td>
</tr>
<tr>
<td>Lowest</td>
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<td>8.0%</td>
<td>7.5%</td>
<td>7.9%</td>
</tr>
<tr>
<td>Grand total</td>
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<td>100.0%</td>
<td>100.0%</td>
<td></td>
</tr>
</tbody>
</table>

**Why?**

Structures of labour market condition pathways
How qualifications are used in the labour market

- **Signal**
  - Occupational labour markets
  - Regulated occupations
  - Entry & progression specified by the profession/occupation
  - Qualifications specify what people can know & do (broadly)
  - Content & skills clearly mapped

- **Screen**
  - Internal & external labour markets
  - Internal: entry fairly open, internal progression
  - External: competition
  - Unregulated occupations
  - Qualifications indicator of capability & attributes (broadly)
  - Content & skill less tightly specified

Ideal types: Four types of pathways

<table>
<thead>
<tr>
<th>High</th>
<th>Business</th>
<th>Nursing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>Humanities &amp; sciences</td>
<td>Engineering</td>
</tr>
</tbody>
</table>

Links to qualifications within field of education

Links to jobs

11/06/2017
Our argument

• Tight matching of credentials & jobs not possible
• Structures of work *condition* & *help shape* pathways
• Not suggesting a ‘tighter’ linear approach
• Credentials not identical with specific occupations – play a broader role
• Workforce development must encompass a broader range of strategies
• Narrowing credentials will narrow opportunities

Why?

Structures of sectors matters
Structures of HE sectors matters

- Universities don’t provide pathways to elite professions
- Elite universities don’t provide (very many) pathways
- Interaction with labour market: Those from disadvantaged backgrounds don’t have social capital to maximise outcomes in labour market

Overall conclusions

- Graduates with combinations of college & university credentials have better outcomes than graduates with college credentials only, but not better than graduates with university credentials only
- Combinations of college/trades and university credentials is a transition from college to university, and provide modest social mobility.
- But pathways still matter & policy can seek to improve outcomes
Returning to the theoretical framework

Reminder:
Different ways of theorising pathways

Human capital
- Rational investment in the self

Liberal
- Social mobility
- Meritocracy & opportunity

Social reproduction theory
- Challenge elite power structures
Bourdieu’s framework

- Field – labour market & HE – structured by power relations
- Social capital & cultural capital unequally distributed in fields structured by power
- Pathways really matter & can be improved, but don’t necessarily challenge elite & stratified hierarchies in HE or the labour market

Implications for policy

Role of credentials

In labour market: as entry or upgrade
In education: as transition to higher level
In society - to support social inclusion & citizenship
Finally

• We’ve shown how structures of labour market condition pathways & why we can’t tie credentials more tightly to jobs because it will limit job opportunities
• But we need also to consider broader role of credentials in society – the 3rd purpose needs more thought
• We know that society benefits when more people are educated – the more educated the population, the less support for populism
• We need to think about the implications of this for credentials & pathways

Contact us!

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• https://www.oise.utoronto.ca/pew/
• Thank you!