All dressed up and nowhere to go: PIAAC in Canada

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Abstract

The international adult literacy survey series has been conducted for over 25 years, culminating most recently in the PIAAC results released in 2013. Canada was deeply involved in the development of the series, and for PIAAC funded a sample size around seven times the average. Yet the analysis of the results has been limited, and impact on the field yet more so. This chapter discusses one explanation for the failure of the survey to have a wider impact, and identifies implications for adult education policy more broadly.

Keywords: Surveys, Adult Literacy, Infrastructure, Policy

1   Introduction

The Program for the International Assessment of Adult Competencies (PIAAC) (Organisation for Economic Cooperation and Development (OECD), undated) is the latest in a series of household surveys intended to assess the capabilities of adults in a range of domains. Canada has invested heavily in these surveys for more than two decades, yet there is little evidence that the latest iteration has had much impact on policy or practice. For individuals working within the field of education for adults in Canada it has been striking how little impact the PIAAC survey has had on our work. The question underpinning the current analysis is why this should be the case.

In this chapter I will discuss the development of the international adult literacy series and, more specifically, the part Canada has played in its development. Then I provide a very brief overview of adult literacy programs in Canada, including the tensions inherent to a federal state. One of the key points here is that the field of practice has not been substantially informed by the PIAAC results despite Canada's commitment to the literacy surveys for over twenty years. The following section attempts to explain the gap between investment and impact, using Latour's (1996) actor network theory, and the chapter closes with implications of these insights for adult education more generally. The key insight offered here is that networks matter deeply to the development of any field, and that the loss of any component of a network can have significant consequences that are not easily predictable.

On a global level there is evidence that PIAAC has had impact on discussion around the education of adults. Desjardins (2015), for example, has written on the way that policy and delivery mechanisms affect participation in different countries around the world, with the empirical evidence derived from PIAAC. The American Institute for Research have funded annual tranches of research based on PIAAC, with some notable papers. One example uses survey data to explore the credibility of credential inflation as an explanatory factor (Fernandez & Umbricht 2016) while another combines PISA and PIAAC data to examine gender differences in youth and adult mathematics (Arora & Pawlowski 2017). In terms of concrete impact, analysis of the Dutch results led to the launch of policy initiatives in the Netherlands (Reininga 2014). While overall the body of work exploiting the data has probably been less extensive than earlier surveys, there are good indications that the survey results have demonstrated value and utility.

These examples of impact make the central question of this chapter – why the effects have been so limited in Canada – all the more important. The current analysis takes the form of a case study, though perhaps the notion of a policy account is more helpful. The author has been involved in adult literacy education for more than twenty years, and has engaged in different ways with many of the individuals and agencies referred to in the discussion. In creating this account, the author has drawn on personal knowledge as well as grey and academic literature. Inevitably this means that there is a degree of subjectivity in this discussion, but the author has endeavoured to ensure that the main points have sufficient independent support.

2   PIAAC (and the Canadian connection)

Canada has played a very significant role in the development of the series of survey instruments that culminated most recently in PIAAC. The International Adult Literacy Survey (IALS), the first in the series, was implemented in the 1990s. IALS built on previous American survey design, and can be traced back to the need to test individuals entering the US armed forces. However, this genealogy was considerably enhanced and developed through the work of Statistics Canada and the support of a number of ministries within the Canadian federal government.

The aim of the survey series was to describe the extent and form of human capital within each participating country, reflecting growing appreciation for the work of Becker (1975) and others. In the 1980s and 1990s, explanations for economic differentials that relied on the skill levels of different populations were emerging, and offered interesting insights. It is important to emphasise that the explanations at this time were based on national aggregates and not the skills of individuals. The design of the literacy survey series reflected this theoretical position, using responses from a relatively small number of respondents to model the distribution of skills across the population. There are no individual measures or findings arising from the survey

analyses, and there was never any intention that there would be. Some care must be taken to avoid inadvertently drifting into this type of interpretation.

One key attribute of these surveys is the theory of literacy and numeracy measurement they adopted. There are many ways to approach measurement of literacy, ranging from vocabulary recognition through sentence de-coding to sophisticated comprehension testing. Whichever is chosen, it is critical to consider two aspects of validity; the extent to which it can be considered an accurate measure of literacy ability and the degree to which that measurement predicts a broader suite of human capital attributes. In the literacy surveys each task has consistently tested "the ability to find and extract sufficient information from among highly relevant information in the stimulus material" (Kirsch and Guthrie 1980, p. 91). These authors go on to describe four variables that make tasks easier or more challenging: the order in which information is presented, the amount of information, whether the exact words of the response are in the stimulus, and the total number of categories of information (words, graphs etc.) that need to be brought together. This fundamental philosophy has remained consistent during more than 25 years of adult literacy surveys despite concerns that it is a narrow data pool on which to base inferences about human capital (Hamilton and Barton 2000; St. Clair 2013).

Over the years of the survey series the interest in human capital – particularly with regard to individual and national productivity – has grown more explicit. The Organisation for Economic Cooperation and Development (undated) states:

> "The Survey of Adult Skills (PIAAC) is an international survey conducted in 40 countries that measures the key cognitive and workplace skills needed for individuals to participate in society and for economies to prosper. It measures, in particular: Literacy, Numeracy, Problem solving in technology rich environments. Educators, policy makers and labor economists will use this information to develop economic, education, and social policies that will continue to enhance the skills of adults."

Canadian involvement in the adult literacy survey series began in the 1990s, largely through the work of Scott Murray. Murray, who was the Director of the Special Surveys Division of Statistics Canada, was intrigued by the possibilities offered by the first survey in the series, the International Adult Literacy Survey, and ended up as International Study Director for IALS and its next iteration a few years later. Murray was a strong proponent of the surveys and the possibilities for more fully informed social policy. Throughout the early years of the survey Canadian statisticians were involved in the surveys at both the technical and political levels. Many aspects of the surveys were modelled on the *Literacy Skills Used in Everyday Activities* instrument, an innovative approach to assessing literacy developed by Statistics Canada in 1989 (Standing Committee on Human Resources Development and the Status of Persons with Disabilities 2003).

By the time of PIAAC (Statistics Canada 2013) there was less direct involvement of Canadians in the survey design and technology, but their contributions remained important. One example of the Canadian federal government's continuing commit-

ment to the surveys is the sample size for PIAAC: 27,285 Canadians participated, by far the biggest (and most expensive) sample in the exercise and almost seven times the average. The hope was that this size of sample would allow for analysis of sub-samples across the highly diverse demographics of Canada.

The stronger labour market and productivity discourse around the survey parallels a change in thinking about basic skills within the Canadian political centre. In the mid-1980s a group of progressive thinkers came together to establish the National Literacy Secretariat (NLS), which can be considered as an advocacy and support unit for literacy education across Canada. In their prime, the NLS were helping the field to obtain research grants and develop resources as a matter of educational equity, driven by a commitment to making education available to all Canadians regardless of age or other circumstance. In the early 21st century the NLS moved into the Ministry responsible for workforce development and evolved into the Office of Literacy and Essential Skills. The focus on skills required for work displaced the interest in support and development of the field, and it is striking that the social aspects of literacy learning, once key to NLS, no longer features in the Office's description of itself: "The Office of Literacy and Essential Skills aims to help adult Canadians improve their literacy and essential skills to better prepare for, get and keep a job, and adapt and succeed at work" (Office of Literacy and Essential Skills 2017).

The Canadian government has every reason to be invested in the PIAAC survey and to take it seriously. Their resources were committed initially in the development of the survey and more currently in the sampling and data collection. The drift in the survey's discourse towards more employment and productivity centred models of literacy and numeracy skills has paralleled the Canadian government's own philosophical transition. It would be a reasonable expectation that policy and practice effects from PIAAC, and the other surveys, would be easy to find.

3   Literacy programs in Canada

Literacy education for adults (and the associated activities such as adult basic education, academic upgrading, and so forth) has always been provided on a patchwork basis in Canada. Policy areas are divided between the federal government and the 13 territorial and provincial governments. Education is at the more local level while workforce development is federal. The implications of this division are extremely significant for adult literacy work, which contains elements of both education and workforce development. The working compromise for many years was that delivery of services was funded and managed at the provincial and territorial level, but that the federal government supported research and pilot programmes across the country, as well as assisting with inter-jurisdictional information flows. One initiative demonstrating this approach was the National Adult Literacy Database, which collected and

curated English-language research from all over Canada and made it available throughout the nation and beyond (Elfert, Käpplinger & Smythe 2018).

Pan-Canadian approaches to adult literacy education offer a number of advantages. The first is economy of scale. While Canada is a large country its population is only just over 30 million, so many jurisdictions have small populations. Initiatives that pull together a number of jurisdictions can help ensure a critical mass of programs and learners. The second, related, point is that specific populations and interest groups can span jurisdictions. For example, Indigenous people may have far more in common with each other than with other residents of the same province, suggesting that cross-cutting work makes sense. Finally, Canada can bring a presence and capacity to international developments that may be more challenging for the sub-jurisdictions. It can be easier to support a multi-million dollar commitment to data collection at federal level than to build support in 13 smaller jurisdictions.

The National Literacy Secretariat helped to support several pan-Canadian literacy organisations, including the National Adult Literacy Database, Centre for Literacy (in Montréal), Le Réseau pour le développement de l'alphabétisme et des compétences, Frontier College, ABC Life Literacy, and the Canadian Literacy and Learning Network. A federal government report in 2003 strongly recommended the deepening and strengthening of pan-Canadian institutions (Standing Committee on Human Resources Development and the Status of Persons with Disabilities 2003) but a Conservative government chose to move in the opposite direction and withdraw funding. The National Literacy Secretariat was re-branded, and all but one pan-Canadian organisation and many provincial groups ceased activity (Hayes 2015).

At the delivery level, adult literacy education is managed by three types of organisations: school districts, colleges, and non-profit agencies. Each has a different emphasis and a different philosophy regarding the work. For example, colleges tend to focus on academic upgrading for entry to post-secondary education, school boards look at grade 12 completion, and non-profits often provide volunteer-driven one-to-one instruction for individuals with very low literacy experience. Nonetheless, the staff working within each type of organisation may know each other, and tend to share ideas and resources. There is some recognition of shared interests and concerns within provinces, often supported by a provincial literacy organisation (for example Decoda in British Columbia). In some provinces, there are conferences and workshops open to educators and learners from all the different sectors. Coordination of activities between provinces is far more limited and unusual.

The closure of pan-Canadian organisations has removed a degree of alignment, however partial and tentative, from adult literacy across Canada. There is no longer a reason for the 13 jurisdictions to co-operate in design and delivery of their provision beyond good will and common interest, and little direct advantage (such as additional resources) for doing so. The timing of this change to the structure of the field overlapped with the finalisation of the PIAAC outcomes and publication of the first set of Canadian results in 2013 (Statistics Canada & Employment and Social Development Canada 2013).

There are two notable phenomena associated with this publication. One is the lack of analysis of the PIAAC data, with the "first" results ending up being almost the only results. In other countries there has been an exhaustive effort to mine the data for all that it holds, including several annual meetings in Washington DC where the American Institute for Research hosted presentations of the results of sponsored research. In Canada, most of the information derived from PIAAC is in the original report prepared by Statistics Canada. Over the last few years there was also a decision to move analysis of PIAAC out of Statistics Canada to the Ministry of Employment and Social Development (underlining the extent to which economic productivity is centred in the analysis) and the Council of Ministers of Education, Canada (CMEC).

The involvement of CMEC is intriguing. It is the forum for the 13 ministers of education from the provinces and territories (often including ministers with responsibility for colleges and universities). This group could recommend a pan-Canadian strategy to build capacity in adult literacy education, which would be welcome. However, they lack two vital ingredients. One is the ability to complete the statistical analysis of the PIAAC results, which requires time and expertise. The second is the money to invest at the pan-Canadian level. The ministers are answerable to their own jurisdictions, and, as in most federal jurisdictions, investing in large scale initiatives that benefit the entire nation is not always priority for the local electorate. Taking all of this together, it appears that the analysis of PIAAC data (already several years old) may have stalled.

Within the jurisdictions, reception of PIAAC has been inconsistent. In some places, notably Alberta and Ontario, there has been interest in using the PIAAC measurement framework in an applied way by creating skills assessment for individuals that map across to it. In other places across Canada experience suggests that there has been far less engagement with – and even knowledge of – the PIAAC survey.

The Canadian government committed, as it has for several decades, to conducting a far-reaching and highly detailed survey of the literacy competences of people living in our nation. The impact on policy and practice appears to have been more limited than in previous versions of the survey, despite the increased strength of the data. While there have always been concerns about the utility of the surveys (St. Clair 2013), there is no indication that the new dataset is anything but stronger than previous versions. The supply side seems to be in place; the challenging issue is what has happened to the demand for this information.

4   Understanding the gap

Making sense of this situation requires some reflection. It is easy to speculate that the Conservative federal government had ideological reasons for pulling literacy education towards workplace skills, or that federal ministries believed that they had gone too far into provincial and territorial jurisdiction and needed to pull back, but in or-

der to identify positive future steps it is more important to look at material structures than putative motives. The critical point is to develop understanding of how the significant and long-term investment in PIAAC ended up creating a policy orphan.

There are a number of different models of how ideas and research flow into policy and practice, with the most influential frequently emphasising the gradual and non-rational nature of the process (Weiss 1980). Many of these approaches assume a shared medium within which policy, practice, and research actors sit. The ideas and insights from research activity (as well as other forms of innovation) flow through the medium and provide a resource for change. The situation is somewhat different for adult literacy education, where the central issue is lack of such a medium.

One way to understand this situation, and to generalise to a theoretical perspective that can inform broader contexts, is through Actor Network Theory (Latour 1996). This theory was initially developed to explain human-technology interaction, but has proven to be helpful in understanding educational contexts (Gaskell and Hepburn 1998). The key idea of Actor Network Theory is that social structures do not exist on their own, but are created and enacted by the actants involved in networks. The actants include both human and non-human components of the network, with agency ascribed to organisations and computers and vehicles and tools as much as to people. Of course, this is not meant to imply that objects consciously act to achieve ends, but that their characteristics, their limits, and the opportunities they offer, shape the contours and possibilities of the network. Many of the most interesting applications of Actor Network Theory have concerned projects that have not been successful, in which case it provides an important tool for understanding the ways networks have failed. The *token* is a key concept, representing a material or semantic object that circulates within the network, being transformed and increasingly reified through this circulation.

The development of a cycle lane on a city street can illustrate Actor Network Theory. The network would include cycling advocates, planners, drivers, and everyday cyclists, but the technology would also play its part; the "needs" of the cars and bicycles, the limitations of the road materials, the weather of the city in question, would all make a difference to the final design. Membership of the network can be expanded almost indefinitely, as each of these actants represents a network in itself. The plan for the road layout would be a token in this case. It would change by each of the actants; for example the cars might require a certain lane width that would permit or prevent two lanes on the cycle path. As the actants influence the plan it becomes less of a draft and more of a reflection of the final situation on the ground.

Applying this theoretical perspective to literacy in Canada is helpful to understanding the changes in the field. It is possible to examine the impact of earlier literacy surveys such as the IALS of the mid-1990s and see the outcome and response as the token within a network. The participants in the network include the pan-Canadian organisations, the National Literacy Secretariat, Statistics Canada, the survey results, the methods for generating those results, and more local organisations. There was a relatively rich network that ensured that many people could gain access to the

results and many did; more than this, people changed their conception of literacy and literacy measurement as a result of the IALS discourse. One example of this is the claim contained in the IALS results that level 3 (out of 5 levels) was the minimum functional literacy level in a modern society. For quite a while, observation suggests, this became shorthand for the goal of adult literacy education – to lift as many people as possible to level 3.

While there were reservations about the IALS survey and its successors at the time (Hamilton and Barton 2000), especially around the claim that 44 % of the Canadian population lacked the literacy and numeracy skills needed for a modern economy (St. Clair 2013) these surveys did have policy impact. They provided a way to think about literacy and language to talk about it, albeit within a specific, vocational frame of reference. Reflecting on that time, and remembering the workshops, institutes, and briefings engendered by the survey, it is probably not going too far to argue that the IALS lent credibility to adult literacy education after decades of the field being seen as a marginalised and less credible form of education.

By the time of PIAAC, almost twenty years later than IALS, the results of the survey had continued to evolve. There were important new components, to do with civic and political participation, and a section of the survey to do with problem-solving in a technology rich environment. The overall tilt of the survey had explicitly evolved from literacy and numeracy assessment to a wider view of the competencies supporting productive and engaged citizenship (though the survey still has some potential growth in this area). The increased sample size, a deliberate decision by the Canadian government to increase validity and utility for sub-populations, also added to the value of the data. The token itself was stronger and potentially more valuable than it had been with earlier surveys.

The network that could utilise, apply, and transform that token was far weaker than it had been before, however. It was not clear who, or what organisation, was the bridge between the bodies producing the survey results and the federal government, and where the results would feed into policy-making. The pan-Canadian organisations were effectively gone, and many of the provincial organisations were much weaker than before. The Council of Ministers of Education, Canada were certainly engaged, but as noted before, had limited resources or political incentive to act. In effect, the PIAAC survey was feeding good information into a vacuum.

Reporting on a conference on the utility of social science in policy-making, Dukelow and Giles (2014, p. 17) argue that "the case studies show how important it is to cultivate good relations within and between departments, foster the sharing of evidence, and maintain a constant dialogue between researchers and users". To a great extent this comment captures what is missing in Canadian adult literacy education – and adult education generally – in the second decade of the 21st century.

This analysis would be unsurprising to many involved in the adult literacy field in Canada. It makes a lot of intuitive sense that if there is no group of people or agencies able to act on the data then research will have limited impact. What this analysis helps to clarify and emphasise is the need for a response that goes beyond

the technical. It will not help to conduct a better survey or to ask different questions. A field of knowledge and practice possesses both epistemological and sociological elements, that is both knowledge and the networks to activate it (Kuhn 1962). One of these elements cannot be substituted for the other, with, for example, more robust knowledge making up for a weak social network to circulate it. Yet it appears that this is exactly what was attempted in Canada with PIAAC, with considerable resource committed to improving the data but little or no thought given to how it could be used or who would use it. There almost appears to have been a naïve scientism at play, where decisions were driven by the expectation that the value of the data would speak for itself regardless of the lack of listeners.

5 Implications for PIAAC, Canadian literacy education, and the education of adults everywhere

This brief case study offers implications that go far beyond the specifics of the PIAAC survey in Canada, but it is perhaps useful to start there. Put bluntly, it appears that there is little point in participating in the next round of surveys (around 2020 perhaps) unless there is a commitment to analysing and using the data. Without a network to activate – and be activated by – the token represented by the survey results, the generation of the data is literally pointless. While a few academic students of literacy (like the author) are happy to see the data and interested in what it displays, that is a long way from the comprehensive impact upon the literacy field that the survey designers and implementers were hoping for, or indeed that justifies the use of resources. One individual with whom I talked during the preparation of this chapter referred to the current situation – with investment of huge amounts of time and resources leading to a neglected dataset – as "shameful."

The broader point is that the sociological aspects of information utilisation are extremely important in the translation between research data and the meaning of that data for policy and practice. As implied in the discussion above, high quality data that does not have an audience will remain untransformed and unimplemented. It is possible to discern two aspects to this network that were missing in this case, and are highly suggestive for others. The first was the people, for whom the results would have symbolic value. The second was the other resources, from policy to actual material goods, which were not available to interact with the data.

This observation is not limited to Canada. In the UK there has been a disappearance of adult education from policy conversations and a dissolution of agencies designed to support the field (Hall 2018), and a similar failure to benefit from long-established resources and, perhaps worse, people with decades of specialised experience. It seems that there is a clear implication here; to attain anything like the level of evidence-based policy that governments often espouse, there needs to be a deliberate strategy to ensure that there is a structure in place. One aspect of this

structure will be the resources to ensure that the findings of the research are implemented well.

The case also underlines the need for intermediary actors to span across different levels of policy and practice. In the discussion, the pan-Canadian organisations played a significant role, as did some of the defunct British organisations such as the National Institute for Adult and Continuing Education. Their primary role was talking to government on behalf of the field and vice versa, ensuring that each area knew the concerns of the other and supporting a flow of information. When it came to large scale surveys they were the groups who could push for local analysis, for the inclusion of specific groups, or for accessible and convenient summaries of the findings. These intermediaries perform a crucial role in the connection between state and civil society, one that cannot be easily replaced, and certainly not through technological or purely instrumental channels. In the case of PIAAC, intermediary organisations could have been funded for several years on the resources spent on data collection.

However, this is not to deny the value of data from well-designed survey. The data from PIAAC, especially if there were to be compatible long-term data collection to support longitudinal analysis, holds enormous promise for understanding more about the broader field of education for adults and its contribution to competencies across the population. More than this, it could help to provide a perspective on other factors affecting lifelong and lifewide learning. For example, the peak competency scores in PIAAC were not among the cohort immediately out of school but those around their late twenties. This raises fascinating questions about the contribution of life and work experience to competencies, as well as whether schooling is improving over time in its ability to support competencies. Another intriguing finding is the reduction of competency scores in older adults, which could either be a normal part of ageing or the long-term effects of less effective schooling. Adult educators generally would have a great deal of interest in issues such as these.

The final point is a strategic one. At the beginning of the survey development process there was a decision to place the surveys further towards workforce development and less towards education. The discussions in earlier parts of this paper do, I hope, show why this was a reasonable decision at the time. What could not have been foreseen was the extent to which economic concerns came to dominate governance concerns in Canada over the last three decades. As the body politic moved towards more instrumental views of education the initial placement of the survey series was pulled along towards a productivity agenda, perhaps further than was initially intended. There is a lesson here regarding political placement for all those interested in education for adults. When one is in a changeable environment (and one is always in such an environment) it is important to be careful about compromise and the unintended consequences it may produce.

Based on these reflections it is possible to summarise some implications for future initiatives. It seems that network building is a critical aspect of bringing about change in a field. Without the involvement of a range of people and resources there

is no medium for the change. The highest quality information will not have an impact without a network to mediate and activate it. This implies that it is important to consider token and network as separate but co-implicated actants. This network can also bridge across levels of policy and practice. While building networks and mediating organisations can be demanding of time and resources, not investing in them raises the possibility of inaction and loss of all the investments made so far.

The more cautionary note arising from this discussion, and one which may contain an important lesson for adult education broadly, is that limiting the effectiveness of the field does not require measures that directly affect each program. Disrupting the network within which programs operate is sufficient to cause significant harm, and that disruption does not require deliberate ill-intention. It may well be that a move appearing to be a rational way to save money, for example closing an organisation that does not provide direct service to learners, has very significant unintended effects upon the viability of the field. The example in this case involved data, but it could just as easily apply to a range of practice innovations or materials, and have an equally significant impact. The infrastructure of a field is not a luxury or an extra; it is the skeleton that permits it to move.

6   Conclusions

The case of PIAAC in Canada is enlightening because it is so extreme. On the one hand there is such commitment of time and resource to the development of an innovation that should be of enormous value to the field. On the other, there is an effective demolition of the same field, at least at the federal level. The truly intriguing question, and one to which there is no answer, is whether these two events were deliberately designed to occur at the same time. It is possible to discern that the same political phenomenon – a turn towards economistic values – could produce both outcomes, by insisting on increased workforce data while demonstrating scepticism towards the value of education for adults. This was, perhaps not coincidentally, the period during which arguments that a dollar invested in initial education produced more return than a dollar invested in adult education began to be taken seriously (Silles 2007). Nonetheless, the final product of a highly developed and expensive dataset with no way to benefit from it does seem ironic.

The main insight arising from this discussion is that infrastructure and networks matter, and that a healthy and effective field requires both an active and engaged group of people and a means of generating the policies and information to shape that field. It is critical that adult educators find ways to prevent the erosion of the field through withdrawal of resources and support for aspects of the work that may seem detached from direct delivery but actually work as vital components in a broader network of support. As PIAAC in Canada demonstrates, when we are all dressed up, we need somewhere to go.

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