



Metadata in organisational surveys



Prof Tony Machin
Director of the Career and
Organisational Research Unit at the
University of Southern Queensland



Aim of this presentation



- I will outline the importance of designing organisational surveys with a focus on the metadata. All surveys should provide a range of metadata which is held by a metadata registry and accessible to all researchers.
- I will describe what types of metadata should be reported, how a metadata registry would operate and the advantages this would provide to all researchers.

Organisational surveys



- Surveys are one source of organisational data that have been used extensively to provide managers with feedback about a wide range of human resource issues including employee engagement, organisational climate, and change processes.
- Recent discussions have focused on the benefits of linking survey data with other measures of organisational performance

Benefits of a metadata-driven approach



Iverson (2009) outlines the benefits of a metadata-driven approach to survey design in which the survey questions are created while simultaneously capturing the response options, intended purpose of the question, relationship of the question to other questions, and any other relevant information.

First reason for collecting and reporting survey metadata



- Organisations commonly outsource their survey data collection
- In order to ensure backwards compatibility with previous survey instruments, researchers should provide the metadata along with the other deliverables at the conclusion of the survey.

Second reason for collecting and reporting survey metadata



The provision of metadata allows the organisation to re-purpose their survey data and establish the linkage between employees' perceptions and organisational outcomes.

Third reason for collecting and reporting US survey metadata

There are multilevel analyses that are appropriate when data are in a hierarchical, multilevel structure and the conceptual models include cross-level linkages.

First example



- I was asked to redesign a survey tool while maintaining the ability to make comparisons between previous surveys that had been administered.
- Important metadata included:
 - a list of all of the previous survey items,
 - their item number from the previous survey,



- the actual wording of the item,
- the revised scale to which it was expected to contribute (see Figure) and
- a number of new items that had not appeared on the previous survey.

The		The Individual		Outcomes
Organisation				
Manager		Adaptability,		Recommend
Performance,		Commitment,		workplace,
Senior Manager	→	Career	7	Turnover
Performance,		Satisfaction,		Intention,
Workplace		Confidence in own		Retirement
Morale,		Management		Intention, and
Staff		Abilities, and		Understanding
Involvement,		Appreciation for		Customers.
Workplace		flexible working		
Distress, and		hours.		
Diversity.				

Second example



- An organisation requesting that the measures of organisational climate and employee well-being be linked to historical patient outcomes (Machin, Goh, Patrick, & Jury, 2010).
- The study drew together a number of separate datasets including:

2006	2007	2008			
Variable Life Adjusted Database					
Patient					
Satisfaction					
Maternity					
	Patient Satisfaction				
	Medical				
	PRIME CF (Compliments				
	& Complaints				
"Better Workplaces"					
Staff Opinion Survey					



- The majority of data could be matched on one or more aggregate levels.
 - Level 1 Whole of Department
 - Level 2 Health Service District
 - Level 3 Gross Facility (e.g. Hospital)
 - Level 4 Detailed Facility (e.g. Typically discipline specific branches)
- The four level classification scheme was contained in a database which was used to "quilt" the datasets together.

Third example



- The same organisation redesigning their survey reporting format using an innovative scoring methodology (<u>Jury</u>, <u>Goh</u>, <u>Olsen</u>, <u>Elston</u>, <u>& Phillips</u>, 2009).
- The MO-Index was specifically designed to address the issues arising from comparison between two different times.



- Once the new scoring methodology had been approved and implemented, the survey results from previous surveys also needed to be incorporated into the new scoring system.
- The iMO interactive database includes the recalculated scores for previous surveys making it possible to determine meaningful differences between two survey periods.

Metadata registry



- All metadata should be reported to a metadata registry such as the Metadata Online Registry (METEOR) established by the Australian Institute of Health and Welfare (AIHW).
- Suggested metadata include specification of the purpose of the survey, the type of survey conducted, and the timing of the data collection.

Summary



- Access to metadata from organisational surveys will allow better harmonisation of data between different surveys conducted within one organisation as well as across organisations.
- Metadata also allows surveys components to be easily transported.



Metadata also allow research into survey design to proceed so that organisational researchers can discover the optimal combination of items to capture certain variables as well as the optimal survey length for a particular context.

- Metadata can provide the basis for sophisticated analysis of the antecedents, correlates, and outcomes of important organisational initiatives and interventions.
- For these reasons, organizational researchers should provide the metadata to a metadata registry which would be accessible to all researchers.

Contact me if you have any questions



- Professor Tony Machin,
- Department of Psychology,
- University of Southern Queensland,
- Toowoomba, 4350. Australia.
- Telephone +61 7 46312587.
- Fax +61 7 46312721.
- Email: machin@usq.edu.au