

Holistic Assessment of Numeracy

A review by **Tom Ciancone, Flora Hood** and **Joy Lehmann**

“What do you think it means to be competent in numeracy?”

An exciting new book on numeracy assessment is based on how Australian teachers answered this question. *Rethinking Assessment* introduces a model of holistic numeracy competence and examines what this model means for assessment. Developed by a group of eight experienced practitioners/teachers, the resource also drew on input from more than forty other numeracy and literacy practitioners over many months. The participating teacher/practitioners come from a diverse range of programs across Australia.

The project leaders and authors of this book are well-known and accomplished adult numeracy educators. As innovators in the field, Beth Marr, Sue Helme and Dave Tout have authored many other important resources. This book attempts to build on their expertise as well as the experience of other practitioners.

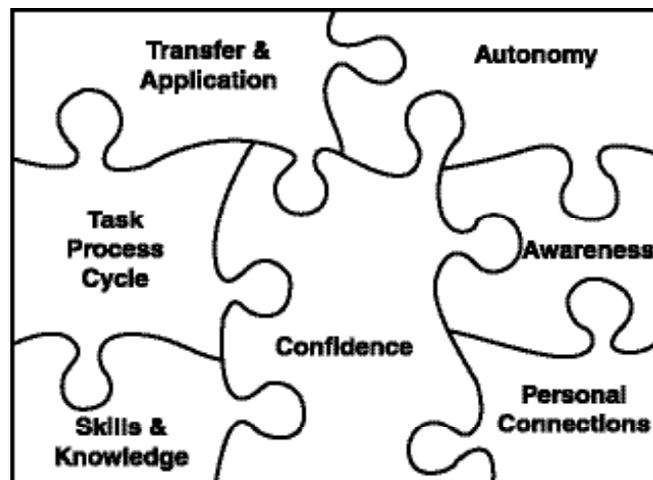
Not surprisingly, the teachers involved with this project concluded that numeracy had little to do with merely acquiring mathematical skills. They are convinced that competence is more than merely completing assessment tasks. In answering their initial question, they came up with a holistic notion of competence. At its core is a change of identity or self-concept. The authors quote James Gee to summarize their approach:

If teachers could turn their 'passion for skills' into a 'passion for identity', then learning would be transformed. (p. 11)

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To portray the interlocking and essential nature of both cognitive and affective components, the authors use a jigsaw image.

In *Rethinking Assessment*, the authors put forth their model of holistic competence, then elaborate on it with explanation and supporting quotations, and finally provide a variety of sample assessment tasks and materials. In keeping with the theme of listening to the voices of teachers, almost every page of the book includes quotes from teachers.



Strategies for Assessment

The first section of the book contains an extensive overview of assessment strategies used by practitioners. These include:

- keeping track of student progress
- bringing reality to assessment
- using interviews in initial assessment
- using open-ended assessment tasks
- negotiating assessment
- focusing on student success
- focusing on awareness of learning, and
- focusing on student autonomy

In their discussions, the experienced practitioner group tried to determine the difference between an assessment task and a learning task. Their conclusion was that “any task that requires students to apply skills in a realistic situation, or demonstrate their conceptual understanding, has the potential to be an assessment task.”

Although the book clearly focuses on strategies of assessment for learners, the authors acknowledge that funders require accountability tools that are both meaningful and quantitative.

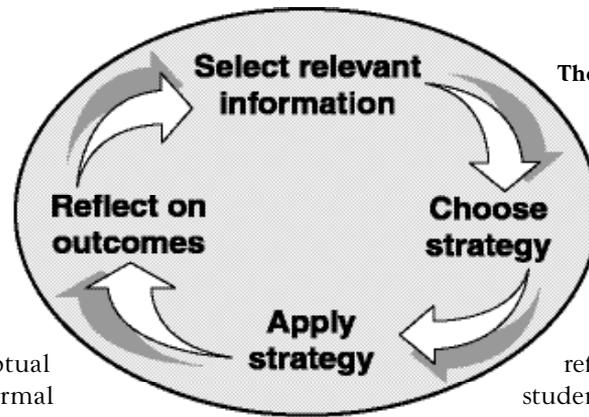
Sample Assessment Tasks & Materials

The second section of *Rethinking Assessment* presents detailed descriptions of eighteen assessment tasks, along with various templates and stimulus materials—including possible numeracy levels, recording sheets,

suggested procedures and extensions to other literacy and numeracy tasks. Since these are based on real experiences, there are, in some cases, sample student responses and analysis.

One task, called Number Card Sorting, assesses conceptual understanding in a very informal way using open-ended recording. Another task, Making Biscuits, is based on a recipe as the real-life stimulus; in this case, the two sample recording sheets are structured checklists based on observing the task process cycle.

Finally, the book includes two sets of photocopiable templates. One set contains formative assessment activities that can be used as discussion starters or prompts for writing. These prompts focus on student confidence, autonomy and awareness of learning, such as "When I don't know how to get started, I could...", "How do you feel about numeracy at the moment?"



The Task Process Cycle

and "What did you learn today?" The second set of templates helps teachers navigate their way through open-ended tasks. The suggested procedure includes tuning in to the task, introducing the task, reflecting on the task, focusing students' ideas and strategies, and encouraging evaluation and reflection.

Conclusion

Rethinking Assessment is "a resource book for practitioners, policy-makers and assessors." It provides a theoretical framework grounded in the experience of numeracy practitioners. Do the authors accomplish what they set out to do? Very definitely, yes! This resource advances the field of numeracy, but more broadly, it breaks ground in assessing learning in adult basic education. ■

Marr, Beth, Sue Helme and Dave Tout (2003).

Rethinking assessment: strategies for holistic adult numeracy assessment.

A resource book for practitioners, policy-makers, researchers and teachers.

Language Australia: Melbourne.