This is the published version (version of record) of:


Available from Deakin Research Online:

http://hdl.handle.net/10536/DRO/DU:30034474

Reproduced with kind permission of the copyright owner.

Copyright : ©2010, Australian Association of Mathematics Teachers
Embracing Mathematics: On Becoming a Teacher and Changing With Mathematics
Author: Peter Appelbaum with David Scott Allen (and others).

My formal teacher-training began in 1972, and I have worked in schools and teacher-education ever since. I have read many books about education, generally, including many that focus on training school teachers, and many that discuss mathematics education, and some that specifically focus on training school mathematics teachers. Appelbaum and Allen’s book *Embracing Mathematics*, is one of the strangest of these books that I have ever come across.

Appelbaum explains the strangeness by declaring that it is, intentionally, an “alternative methods text” (p. xxi). Indeed!

Part of this strange alternativeness is that it explores primary, secondary and post-secondary, and it is aimed at student-teachers as well as teachers.

Appelbaum’s Prologue begins with the question: “What does it mean to be a teacher of mathematics?” His own answer is subtle and imprecise. It rests on seeing teacher of mathematics?” His own answer: “What does it mean to be a teacher of mathematics?” Then he adds to this that, in his view, teaching is lent to “embracing mathematics”. Then he is used! Appelbaum expands the idea of the paradoxical conclusion is that if Appelbaum can say what it does mean to be a teacher of mathematics then he is no longer growing and changing, and hence is no longer becoming a teacher of mathematics. An “arrived” teacher is no longer an active growing-teacher.

The slipper subtleness of the discussion should be starting to become clear. The words seems to be simple and everyday, but they are used in challenging ways, and need careful critical consideration to reveal their (likely) intentions.

Almost certainly there is a good book in this challenging discussion, but it is well hidden—or, it is structured and written in ways that make it hard to know where you are, or what you are actually reading or meant to understand.

To begin grasping the richness of the challenges, it must be understood that each chapter (presumably by Peter Appelbaum himself) is followed by a reflective commentary by David Scott Allen, but then each chapter-reflection is itself followed by what are called “Action Research” discussions from a range of other contributors: Isaiah Manzella, Karen Cipriano, Ada Rocchi, Colleen Murphy, Kristen Iaccio, and Petal Sumner (all school teachers). There is more: each Action Research section is followed by a MathWorld section that poses questions, mainly mathematical, but some more broadly educational, like a worksheet. In one of several appendices, Bernadette Bacino offers solutions and hints for the six MathWorld sections. There is even a “songsheet” with words for a song called “Polya Was a Mathematician”, to be sung to the tune of “Joy to the World” (not the traditional Christmas carol, but the 1970 hit by Three Dog Night which starts, “Jeremiah was a bullfrog…”).

David Allen, a teacher in his own right and at one stage a trainee-teacher student of Appelbaum, introduces the whole book with a Preface, “How Can I (Better) Embrace Mathematics?”. He also has an almost-concluding Afterword, “What Will You Write in Your Chapter?”. The book, if nothing else, offers itself as a large multi-voice conversation on its many topics, mainly concerned with thinking mathematically and communicating this to others. Clearly the reader is expected/invited to “embrace” his or her own “becoming” by joining the conversation—hence the challenge of writing one’s own “chapter”!

Following the “Brief Contents” that in the usual way lists the official name of each chapter and major follow-on sections, the rather larger Contents listing is an annotated summary of the broad ideas of each chapter and its major sections and contributors.

As noted, the effect is partly like being at a very noisy and busy party—a lot of people have the opportunity to do a lot of talking at you! When the discussions get going they use long paragraphs, and pages are often broken up by grey-shaded challenges to think about education, or mathematics, or both.

The stance is deliberately post-modern, and uses the reader’s reaction to the Quentin Tarantino film Pulp Fiction as a kind of cultural litmus test. If you focus on the film’s violence, you are “modern” in mind-set; by contrast, if you focus on its humour you are seeing its irony and have a “post-modern” mind-set. That is, the film is seen as being different from how it appears, like a pop-star’s stage persona being different from the actual personage of the pop-star: here “irony” is the discrepancy between immediate appearance and possible underlying but different truth. (In my case, I know about the film, but have not seen it: what does that say about me?)

Consider the Name (cited author) Index. Some familiar, possibly expected names are present: Polya, Lakatos, John Mason, Carraher, Lave, Davis and Hersh, Dewey, Escher, Fermi, Howard Gardner, Herbert Ginsburg, Herbert Kohl, Mellin-Olsen, Noddings, NCTM, Piaget, Reys, Vygotsky, Walkerdine. Some unexpected names also appear: Bettelheim (a psychoanalyst), Bourdieu (a French philosopher), Buber (a German existential theologian), Foucault (a French philosopher), Frankenstein and Powell (ethno-mathematicians), Freud(’), Noel Gough (an Australian post-modernist educational theorist), Edgar Allen Poe (an American literary giant), Rorty (a philosopher), Winnicott (a psychoanalyst of infancy and mother-
Post-modernist view of a curriculum (and pedagogy) that is, by its historical nature, fundamentally traditional—and/or they have a playful rebellious streak.

I would recommend this book for strong-minded, adventurous thinkers who want to explore things such as Bourdieu’s “habitus” or Deleuze’s “nomadic epistemology”, or Britzman’s endorsement of “perversity”. A graduate student, or a thoughtful professional, who wants to see what else might be possible in the broad territory of “mathematics education” and “education” and philosophy of culture, will find a great deal of stimulus here!

Otherwise I would happily plunder it for good activities, and skip the background theory, or pick the eyes out of the more personally interesting, and convincing theorists that Appelbaum and confederates draw on, such as John Mason.

Reviewed by John Gough, Deakin University

The Creative Use of Odd Moments
Author: Doug French
Published: The Mathematical Association, Leicester, UK, 2007
ISBN 0-906588-626

Available from AAMT: $42.00 for members

#51 How many straight cuts are needed to cut a 4 by 6 bar of chocolate into 24 separate pieces. Can you do it more than one way?

This exercise is actually a special case of a simple and more general result that tells us the number of tears needed to split a piece of paper into $n$ pieces is $n – 1$.

#68 In how many ways can you shade 3/8 of the squares of a two by four rectangle? In how many ways can you shade 5/8?

This problem lays a foundation for a revisit when considering Pascal’s Triangle in later years.

I highly recommend that any teacher of middle years mathematics classes should have a closer look at this publication and consider it for both a faculty and personal library.

Reviewed by Carol Moule
What knowledge of mathematics do secondary school math teachers need to facilitate understanding, competency, and interest in mathematics for all of their students? This unique text and resource bridges the gap between the mathematics learned in college and the mathematics taught in secondary schools. Becoming a Reflective Mathematics Teacher: A Guide for Observation and Self-Assessment, Second Edition. Baroody/Dowker (Eds.) Embracing Reason: Egalitarian Ideals and the Teaching of High School Mathematics. Cobb/Bauersfeld (Eds.) Dive into a huge list of math books for teachers, administrators, parents, and students to shift beliefs, improve pedagogy, and build content knowledge. Great Books Related to Mathematics Content Knowledge, Pedagogy, Leadership, Psychology and More! Great Reads to Rethink Your Philosophy of Mathematics Education, Build Your Content Knowledge, Sharpen Your Pedagogical Practices and Much More! This page is the Ultimate Guide Of Math Books For Teachers because it is the list of many books I’ve read to challenge my thinking around mathematics education and education in general, to build my own conceptual understanding around big ideas I was never taught, and to improve my instructional practice from day to day in the classroom. Buy a cheap copy of Embracing Mathematics: On Becoming a book by David Allen. This alternative textbook for courses on teaching mathematics asks teachers and prospective teachers to reflect on their relationships with mathematics and how Free shipping over $10. Embracing Mathematics: On Becoming a Teacher and Changing with Mathematics. by David Allen and Appelbaum Peter. Rated 0.00 stars. No Customer Reviews. Select Format. Paperback. Encyclopedias of Mathematics Books. The Princeton Companion to Mathematics. by Timothy Gowers, June Barrow-Green and Imre Leader (Editors). Review: This is an extraordinary book that every student and mathematician should absolutely have. The PCM carries the true signature of a math encyclopedia in that it is versatile and capable of being all things to all learners in every field of mathematics, and on all levels also. In light of its broad spectrum of topics, the editors have managed to keep this book cohesive and well knit together. During the course of reading this one, it will become blatantly clear to the reader that the author has created this work out of passion and a genuine love for the subject. Every engineer can benefit deeply from reading this.