

8th WiPSCSE conference
Aarhus 11th November 2013

Sally Fincher

Classrooms, Kitchens & Farms: The Narrative Nature of PCK



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Classrooms, Kitchens & Farms: The Narrative Nature of Pedagogical Content Knowledge



University of
Kent

Kitchens, Classrooms and Farms?

- I've chosen to anchor my talk around these three domains as I think they share structural similarities and comparison may afford us new ways of looking on teaching practices.

Characteristics of teacher knowledge

- “People think of good and bad teachers as engaged in the same activity, as if education was a substance, and that bad teachers supply a little of the substance, and good teachers supply a lot.”

Keith Johnstone

Characteristics of teacher knowledge

- Teacher's knowledge is contingent and *situated*. It relates to this subject, this classroom, these students.
- It is *embodied*. It belongs to individuals, and is constituted from their experiences, beliefs, skills and knowledge.
- It is often also tacit. "That's the way we do things here" or "I do it like that because that's what works".

Situated possibilities

- Tsui (following Benner) talks of practice as occurring in a space of *situated possibilities*
- “... Being situated means that one is neither totally determined or constrained nor radically free in how one acts. Rather one has *situated possibilities*, certain ways of seeing and responding that present themselves to the individual in certain situations, and certain ways of seeing and responding that are not available to that individual”

Situated knowledge in other domains: kitchens

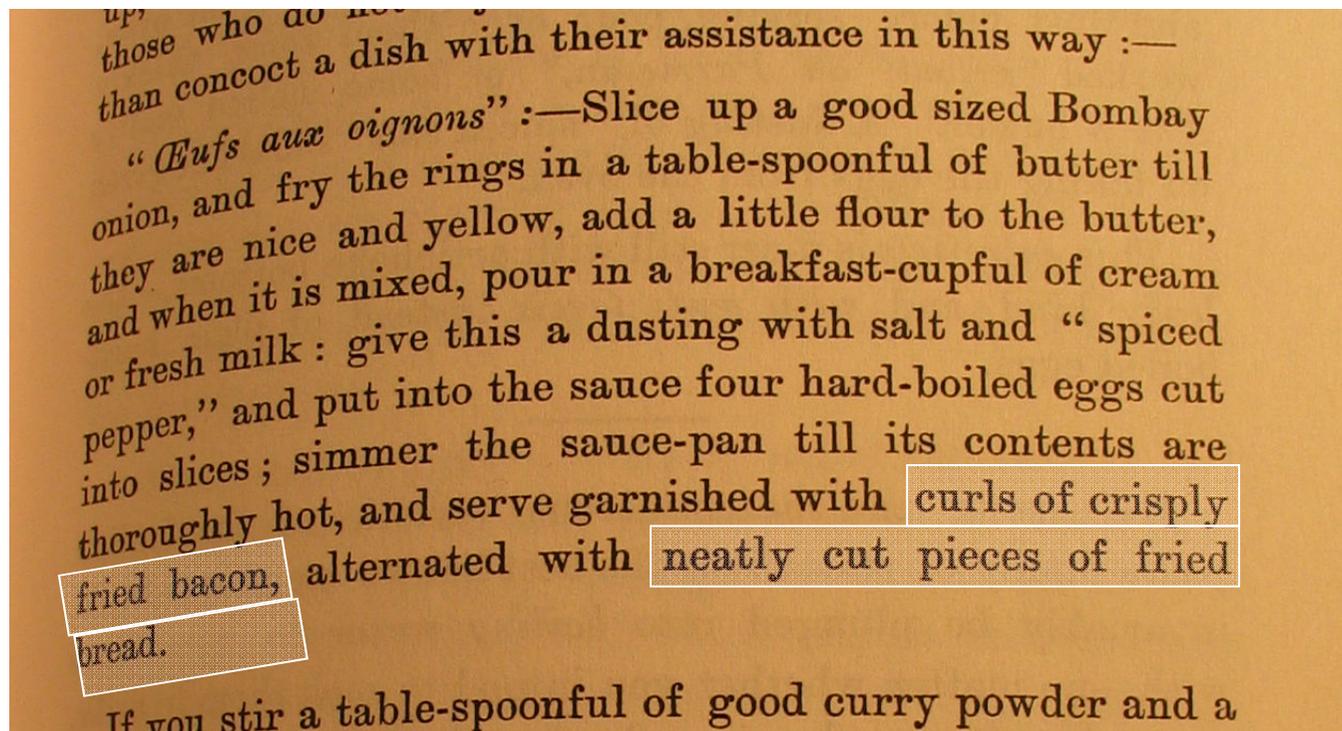
- I think cooking – and kitchens – have structural similarities to teaching and learning.
- Cooking, too, is inevitably situated. It takes place in *this* kitchen, with *these* tools, and I am preparing a meal for *these* eaters.
- I have only my own knowledge and skills to draw on “in the moment” and have to deal with emergencies and spills as they happen.
- It, too, is a space of situated possibility.

Cooking competence

- a. Use of utensils and appliances
- b. Multitasking
- c. Monitoring and adaptation
- d. Planning
- e. Reproduction of recipes
- f. Cognitive skill
- g. Nutritional knowledge

Comber et al 2013

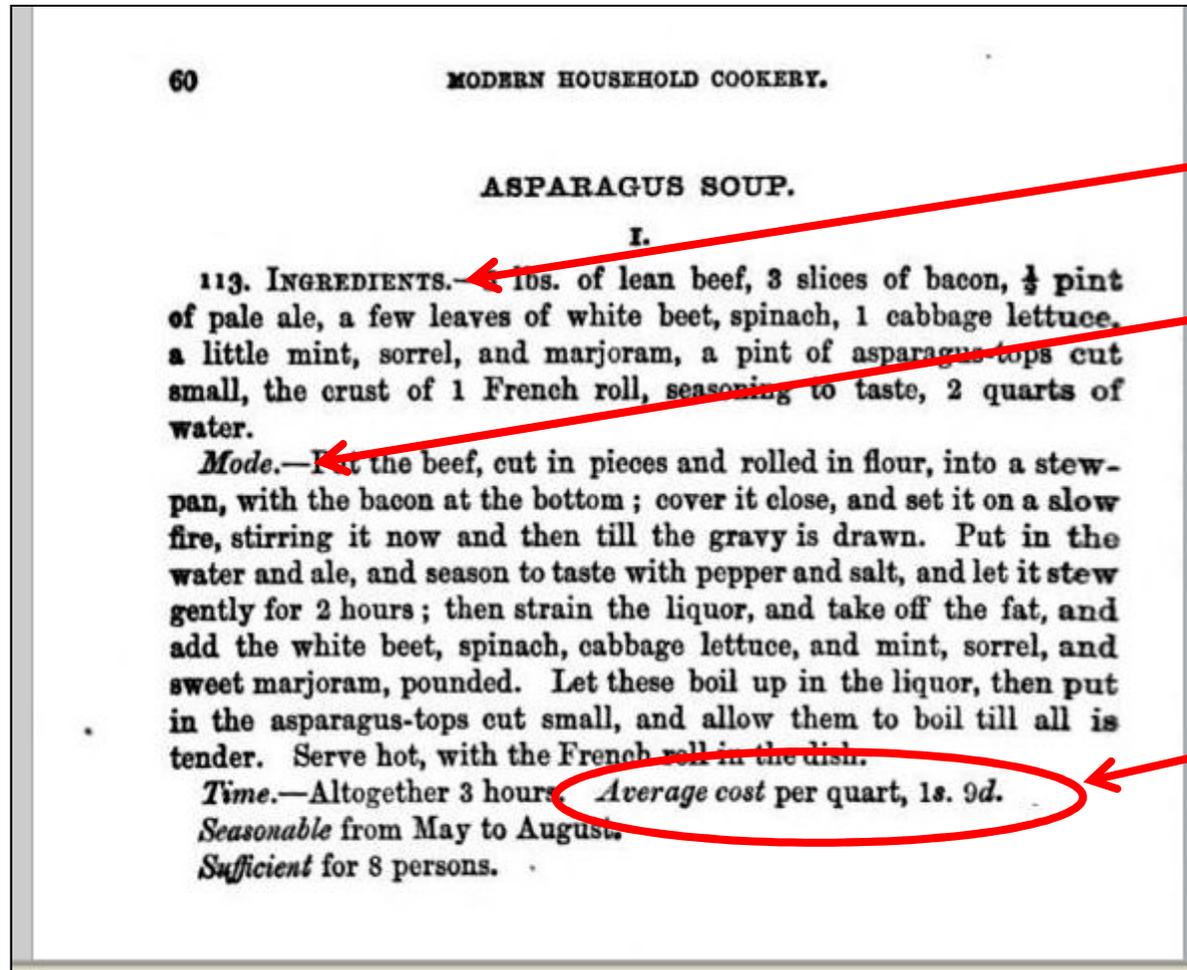
Col. Kenny-Herbert (“Wyvern”) (1878)



A straight
chronological
narrative.
Do this first,
then do this.

Which means if you follow it chronologically (i.e. you don't read right through to the end before you begin) you may be nastily surprised

Isabella Beeton (1863)



Separates ingredients from method

Adds some context

Eliza Acton (1845)

milk, $\frac{1}{2}$ of pint: 1 hour. Pounded sugar, 4 ozs.; butter, 2 ozs.; eggs, 2; little milk: $\frac{3}{4}$ to 1 hour. Or: sugar, 6 ozs.; butter, 3 ozs.; candied orange-rind, 2 ozs.; baked nearly or quite an hour.

THREADNEEDLE STREET BISCUITS.

Mix with a couple of pounds of sifted flour of the very best quality, three ounces of good butter, and work it into the smallest possible crumbs; add four ounces of fine, dry, sifted sugar, and make them into a firm paste with new milk; beat this forcibly for some minutes with the rolling-pin, and when it is extremely smooth roll it the third of an inch thick, cut it with a small square cutter, and bake the biscuits in a very slow oven until they are crisp to the centre: no part of them should remain soft. Half a teaspoonful of carbonate of soda is said to improve them, but we have not put it to the test. Caraway-seeds can be added when liked.

Flour, 2 lbs.; butter, 3 ozs.; sugar, 4 ozs.; new milk, 1 pint, or more: biscuits *slowly* baked till crisp.

A GALETTE.

The galette is a favourite cake in France, and may be made rich, and comparatively delicate, or quite common, by using more or less butter for it, and by augmenting or diminishing the size. Work lightly three quarters of a pound of good butter into a pound of flour, add a large saltspoonful of salt, and make these into a paste with the yolks of a couple of eggs mixed with a small cup of good cream, should it be at hand; if not, with water; roll this into a complete round, three quarters of an inch thick; score it in small diamonds, brush yolk of egg over the top, and bake the galette for about half an hour in a tolerably brisk oven; it is usually eaten hot, but is served cold also. An ounce of sifted sugar is sometimes added to it.

A good galette: flour, 1 lb.; butter, $\frac{3}{4}$ lb.; salt, 1 saltspoonful; yolks of eggs, 2; cream, small cupful: baked $\frac{1}{2}$ hour. Common galette: flour, 2 lbs.; butter, $\frac{3}{4}$ to 1 lb.; no eggs.

CORNISH HEAVY CAKE.

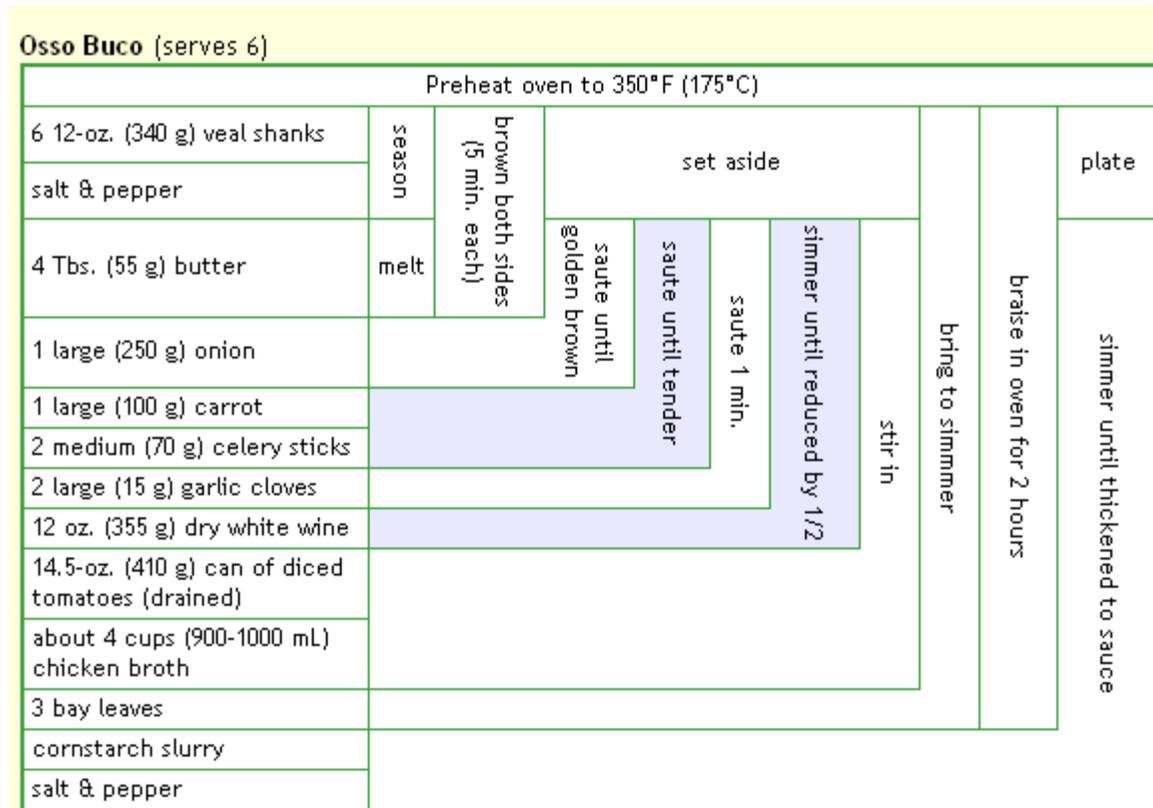
Mix with a pound and a half of flour, ten ounces of well-cleaned currants, and a *small* teaspoonful of salt; make these into a smooth paste

Narrative
recipe

then
summary

In effect, addressing the
needs of novices &
experts in one
representational form

Uncommon form (i)



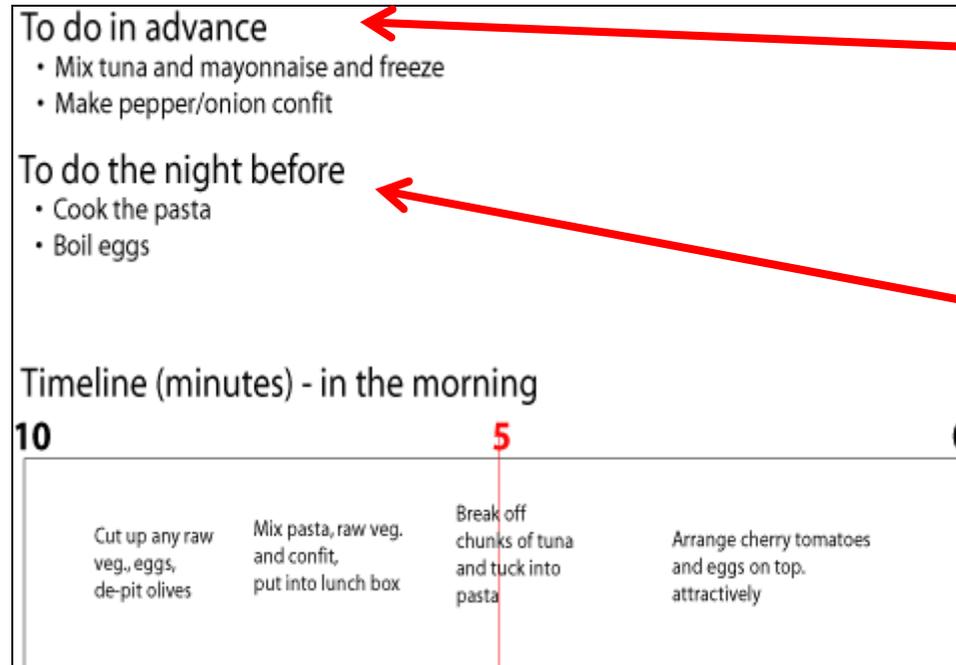
Don't forget the garnish

Gremolata

1 clove garlic	mince	mix	chill
1 medium lemon	zest		
10 sprigs (15 g) parsley	mince		

Diagrammatic form presents ingredients on y axis, time on x axis, “action” on the intersection. Good for overview, but practically unusable (in practice).

Uncommon form (ii)



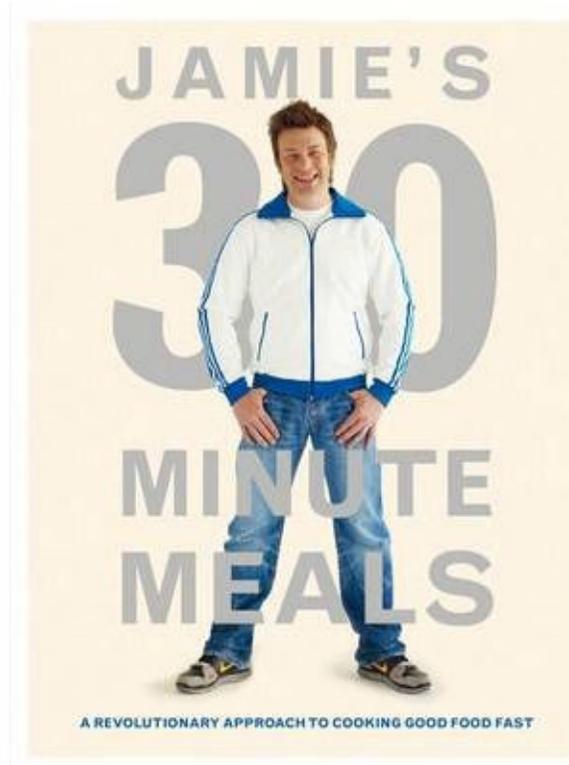
Tells you what to have in the store cupboard (*joubisai*)

Tells you what to have cooked and ready

Counts you down to “zero” – into the bag and out of the door

With a helpful “halfway” point

Uncommon form (iii)



Jamie says

- “The most revolutionary thing about the meals in this book is not that they can be cooked quickly (they can) and it’s not that they use loads of clever shortcuts and tricks (they do) its that I’ve written them in a completely new way”
- “I’m going to walk you through every step needed to create a whole meal, so in 30 minutes you will be putting beautiful main dishes, exciting sides and salads, lovely drinks and puddings, on the table at the same time – all from one recipe!”

PIRI PIRI CHICKEN
DRESSED POTATOES
ROCKET SALAD
QUICK PORTUGUESE TARTS

SERVES 4
(with 2 tarts left over)



CHICKEN

4 large chicken thighs, skin on and bone in
1 red pepper
1 yellow pepper
6 sprigs of fresh thyme

POTATOES

1 medium potato
2 sweet potatoes
½ a lemon
1 fresh red chilli
a bunch of fresh coriander
50g feta cheese

PIRI PIRI SAUCE

1 red onion
4 cloves of garlic
1–2 bird's-eye chillies
2 tablespoons sweet smoked paprika
2 lemons
4 tablespoons white wine vinegar
2 tablespoons Worcestershire sauce
a large bunch of fresh basil

SALAD

1 x 100g bag of prewashed wild rocket
½ a lemon

SEASONINGS

olive oil
extra virgin olive oil
sea salt & black pepper

TARTS (makes 6 tarts)

plain flour, for dusting
1 x 375g pack of pre-rolled puff pastry
ground cinnamon
125g crème fraîche
1 egg
1 teaspoon vanilla paste or vanilla extract
5 tablespoons golden caster sugar
1 orange

TO START Get all your ingredients and equipment ready. Turn the oven on to 200°C/400°F/gas 6. Put a large griddle pan on a high heat.

CHICKEN Put the chicken thighs on a plastic chopping board, skin side down, and slash the meat on each one a few times. Drizzle with olive oil and season, then put on the griddle pan that is heating up, skin side down. Cook until golden underneath, then turn over. Wash your hands.

TARTS Dust a clean surface with flour. Unroll the sheet of pastry, then cut it in half so you end up with two 20 x 20cm squares of pastry (put one in the fridge for another day). Sprinkle over a few good pinches of ground cinnamon, then roll the pastry into a Swiss roll shape and cut into 6 rounds. Put these into 6 of the holes in a muffin tin, and use your thumbs to stretch and mould the pastry into the holes (just like in the picture) so the bottom is flat and the pastry comes up to the top. Put on the top shelf of the oven and cook for around 8 to 10 minutes (set the timer), or until lightly golden.

POTATOES Wash the potato and sweet potatoes and halve lengthways. Put them into a large microwave-safe bowl with ½ a lemon. Cover with clingfilm and put into the microwave on full power for 15 minutes.

CHICKEN Turn the chicken over.

TARTS Spoon the crème fraîche into a small bowl. Add the egg, vanilla paste or extract, 1 tablespoon of golden caster sugar and the zest of 1 orange. Mix well.

PIRI PIRI SAUCE Peel and roughly chop the red onion and add to the liquidizer with 4 peeled cloves of garlic. Add the chillies (stalks removed), 2 tablespoons of paprika, the zest of 2 lemons and juice of 1 lemon. Add 4 tablespoons of white wine vinegar, 2 tablespoons of Worcestershire sauce, a good pinch of salt & pepper, the large bunch of basil and a swig of water. Blitz until smooth.

CHICKEN Slice the peppers into strips and add to the griddle pan. Turn the heat down to medium and keep moving the peppers around.

TARTS Take the muffin tin out of the oven, and use a teaspoon to press the puffed up pastry back to the sides and make room for the filling. Spoon the crème fraîche mixture into the tart cases, and return to the top shelf of the oven. Set the timer for 8 minutes.

CHICKEN Pour the piri piri sauce into a snug-fitting roasting tray. Lay the peppers on top and put aside. Add the chicken to the roasting tray with the sauce. Scatter over the sprigs of thyme, then put the tray into the middle of the oven.

TARTS Put a small saucepan on a high heat. Squeeze in the juice from the zested orange and add 4 tablespoons of golden caster sugar. Stir and keep a good eye on it, but remember caramel can burn badly so don't touch or taste.

POTATOES Finely chop the red chilli and most of the coriander on a board, mixing as you go. Add the feta and keep chopping and mixing.

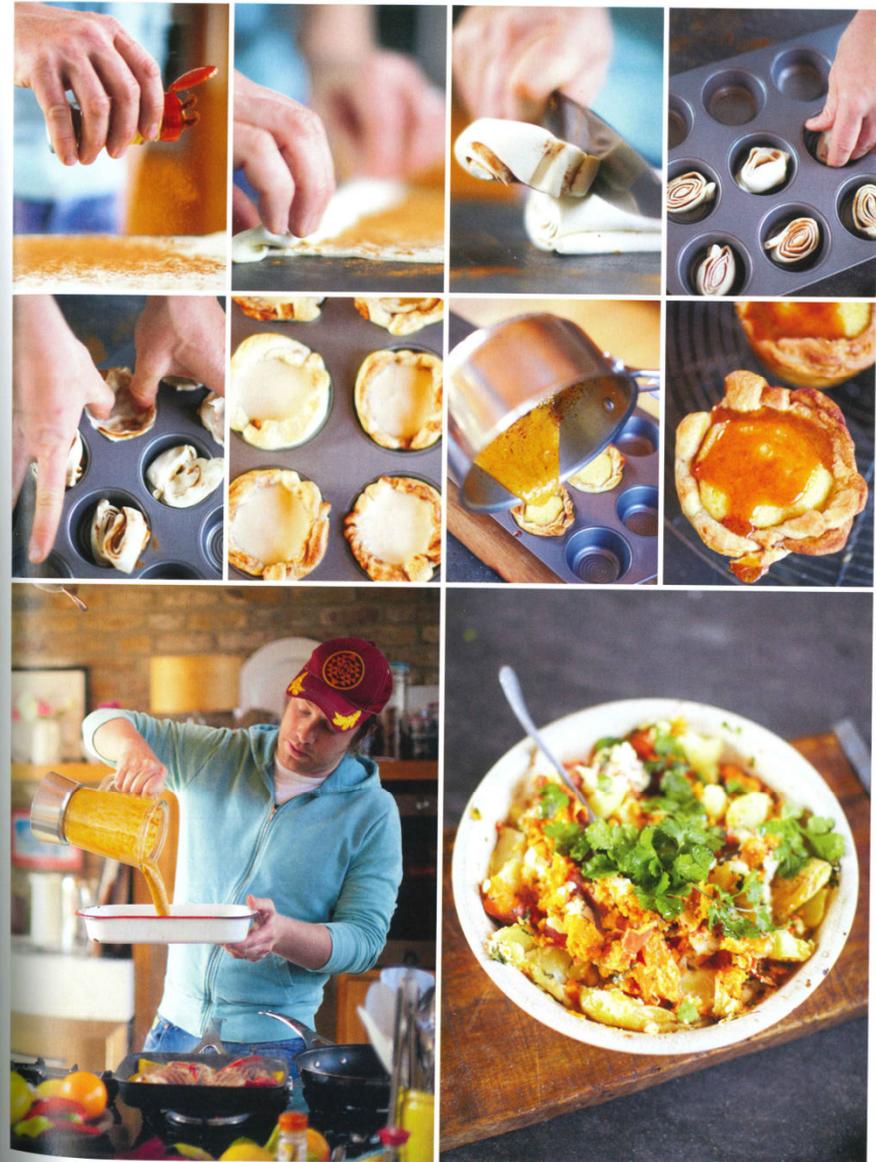
CHICKEN Take the tarts out of the oven and move the chicken up to the top shelf to cook for around 10 minutes, or until cooked through.

TARTS Pour some caramel over each tart (they'll still be wobbly, but that's good). Put aside to set.

SALAD Quickly dress the rocket, still in its bag, with extra virgin olive oil, a good pinch of salt & pepper and the juice of ½ a lemon. Tip into a bowl and take to the table.

POTATOES Check the potatoes are cooked through, then use tongs to squeeze over the cooked lemon. Add the coriander mixture from the chopping board and mix everything together. Season, then take to the table.

TO SERVE Get the tray of chicken out of the oven, sprinkle over a few coriander leaves and take straight to the table.



Cooks say

- “... unlike other books where it will explain all the steps for the starter then the main for example this book jumps between them all so will tell you to fry the chicken then it will jump to preparing the sides and then to the dessert then back to the chicken.”
- 9 Dec 2010 Stuart Duncan

Cooks say

- “I had such high hopes for this book with it breaking records on sales and '30mins' just sounded fabulous. What Mr Oliver failed to stipulate is that in order to pull it all off within that timescale you need to be Jamie Oliver”
- “gemmaloub” 22 Jan 2011

Cooking competence

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Comber et al 2013

The problem with recipes

- The problem with recipes is that we have to interpret and instantiate them: we have to make them work.
- You can have the best recipe for apple pie in the world, but that gives no guarantees of what will come out of your oven.
- Cooking is a situated act.

20 Aug 2012 Kath

- The only thing this book lacks is stating specific timings. For example it will say things like:
- “Put the chicken in the pan.”
- “Chop the vegetables.”
- “Mix the pudding together.”
- “Now take the chicken out.”

20 Aug 2012 Kath

- In reality this goes:
- “Put the chicken in the pan.”
- “Chop the vegetables.”
- “Mix the pudding together.”
- “Now take the chicken out.”

20 Aug 2012 Kath

- In reality this goes:
- “Put the chicken in the pan.”
- *Get colouring pencils for child*
- “Chop the vegetables.”
- “Mix the pudding together.”
- “Now take the chicken out.”

20 Aug 2012 Kath

- In reality this goes:
- “Put the chicken in the pan.”
- *Get colouring pencils for child*
- “Chop the vegetables.”
- *Answer phone to cold caller*
- “Mix the pudding together.”
- “Now take the chicken out.”

20 Aug 2012 Kath

- So I have to guess at what point the chicken needs to actually come out of the pan. It would be really useful if each time something has to go in for a specific time this is written down as a NUMBER, not as a 'time to do the veg' or some such.

V. I. Litvine, 17 Oct 2010

- With this cookbook, I find it difficult to chop-and-change when the recipe I am keen on is intertwined in a maze of instructions for the whole meal. No explicit cooking times are given. Some components of meals are not really recipes on their own (I do not need a cookbook to tell me to sprinkle a flatbread with oregano and warm it in the oven).

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Relevance structure

- Bowden and Marton talk (of teaching) emerging out of “relevance structures”
- “The way in which a particular experience relates to the personal context and the way in which the personal context is making certain aspects of the particular situation appear more important than others, making them come to the fore, while others remain in the background, defines the *relevance structure* of the situation.”

Situated knowledge in other domains: farms

- Farming also is inevitably situated.
- I'm growing things on *this* soil, in *this* climate, in *this* season.

Situated knowledge in other domains: farms

- Farming also is inevitably situated.
- I'm growing things on *this* soil, in *this* climate, in *this* season.
- “... to be successful [farming] requires an enormous amount of tacit knowledge, and understanding about how to make things work in a co-ordinated way, and success has a long time frame.”

Seb Schmoller, CAMEL project

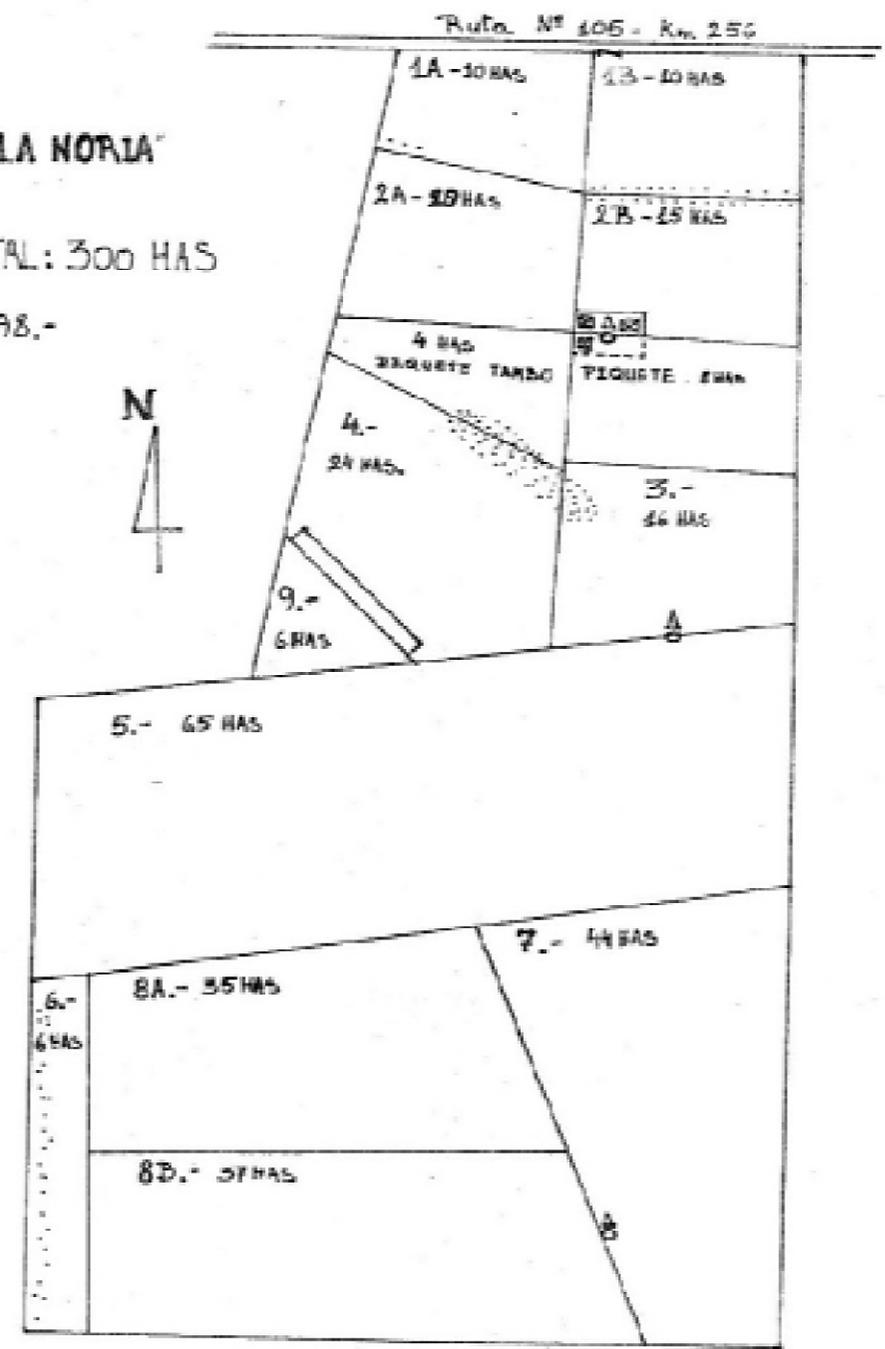
Uruguayan farmers

- Farmers from 8 small farms used to meet monthly, taking turns to visit one another's establishments.
- Participants were provided with prior information including plans and stock lists.

EST. "LA NORIA"

SUP TOTAL: 300 HAS

IPC. 198.-



Seb Schmoller's story

HAZARDO 1961-1962.-

Trigo	808 has	
Cebada cervecera	140 has	
Avena	25 has	
Area agrícola	1.073 has	67%
RF 2º año	60 has	28%
RF 3º año	32 has	
RF 4to año	15 has	
Area post-grano ...	10 has	
CS	366 has	
Area ganadera	323 has	33%
Total superficie útil	1.596 has	100%

Stock ganadero y PECUARIOS

Vacunos (Det. La Esperanza)

3	Vacas de invernada	3 U.G.
1029	Vaquillonas (1-2 años)	76,5
5	Bovillos (3-7 años)	5
3	Vacas de cría	3
9	Demoras/as	1,6
129		88,9
	<u>Lanaros.-</u>	
957	Ovejas de cría	219,2
26	Borregos 2º	2
558	Corderos señalados	55,8
1.543		389,7
14	Vaqueiros	16,8

Total U.G. La Esperanza 429,7

Distribución : 1,13 U.G./ha 3.7.

Nota: La majada estuvo desde el 1/3 en este campo. El total de corderos señalados fue de 788, sobre 1.068 ovejas crías y 1.029 corderos a la señalada (4 de corderos 79) - corderos conjuntos muertos : 58 (5 parturidos 790).- Los 1.068

Cattle stock and endowment

Bovines

- 3 winter season cows
- 109 heifers (1-2 years)
- 5 steers do
- 3 breeding cows
- 9 calves
- Total 129

Sheep

- 957 breeding sheep
- 28 young sheep
- 558 branded lambs
- Total 1543

14 horses, mares and foals

Note

The flock has been in this camp since 1 March. The total of branded lambs was 788, out of 1068 sheep And 1029 counted at the time of branding (% of branding 74).... dead:58 (% of parturition 79).

Rubric for the table

Evolution and projection of the use of the land giving size of fields and crops grown from 1981 to 1985 in rotation: wheat, sunflower, sorghum, oats, barley, maize.

Seb Schmoller's story

Vacas (out La Boria).-

33	Vacas de invierno	80 U.G.
45	Novillas (2-3 años)	45 U.G.
3	Novillas (1-2 años)	1,8 "
11	Vacas de cría	11 "
7	Terreiros/as	2,8 "
<u>145</u>		<u>140,4 "</u>

Lanaros

253	Corderos/as	25,3 "
70	Ovejas mutton	17,5 "
<u>3,20</u>	Carreras	<u>12,5 "</u>
383		55,3 "
6	Yaguarteros	7,2 "

Total U.G. La Boria

Dotación : 1,25 U.G./ha S.P.-

Dotación general: 204,1 + 405,7 = 609,8 U.G. dotación.-

1,17 U.G./ha S.P.

EVOLUCION Y PROYECCION DE USO DEL SUJICO.-

Potrero	Has	1981	1982	1983	1984	1985	1986
14	10	PP80	PP	Avena	C.A.	C.A.aa	PP
18	10	PP80	PP	Trigo	C.A.	C.A.aa	PP
24	20	PP72	Trigo	Trigo	PP	PP	PP
28	15	Maiz/Trigo	PP	PP	PP	C.A.	C.A.
Fig.1	4	PP78	Sorgo/Cebada	aa.PP	PP	PP	PP
Fig.2	8	PP80	PP	Trigo	C.A.	C.A.aa	PP
3	16	PP78	Sorgo/Cebada	C.A.	C.A.aa	PP	PP
4	24	PP80	PP	Trigo	C.A.	C.A.	C.A.aa
5	60	Siraoag/Trigo	PP	PP	PP	PP	PP
7	44	PP80	PP	Trigo	C.A.aa	PP	PP
8A	37	Trigo	PP	PP	PP	PP	C.A.
8B	30	Ar.aa.	PP	PP	PP	C.A.	C.A.
9	6	PP80	PP	Trigo	C.A.	C.A.aa	PP

Uruguayan farmers

- Farmers from 8 small farms used to meet monthly, taking turns to visit one another's establishments.
- Participants were provided with prior information including plans and stock lists.
- On the day of the visit they toured the farm then had a discussion (led by an expert facilitator) about key issues arising and gave views on topics on which the host sought the group's advice.
- There was an evaluation session at the end of the day and the outcomes were documented.

Nicholas Kent (Seb Schmoller's Great Uncle)

6 June 2006

- *Another point was the insistence that the meeting should be “with underpants removed” which means that you have to put all your cards on the table and hide nothing, and often we required the presence of the wife to sound out her views.*
- *At the end of the meeting the leaders of the group reported on all their group recommendations and sometimes there emerged some truths or criticisms which were very painful, and this is what I think helped many to come to terms with reality.*

Situated knowledge in teaching



<http://www.sharingpractice.ac.uk>

Sharing Practice project

- **Sharing Practice:**
How do educators discover “what works”?
- **Representing Practice:**
What is an appropriate representation of teaching practice?
- **Adopting Practice:**
How does educators’ practice change over time?

Teaching competence: Lee Shulman

- **content knowledge.**
- **general pedagogical knowledge**, with special reference to those broad principles and strategies of classroom management and organisation that appear to transcend subject matter.
- **curriculum knowledge**, with particular grasp of the materials and programmes that serve as ‘tools of the trade’ for teachers.
- **pedagogical content knowledge**, that special amalgam of content and pedagogy that is uniquely the province of teachers, their own special form of professional understanding.
- **knowledge of learners** and their characteristics.
- **knowledge of educational contexts**, ranging from the workings of the group or classroom, the governance and financing of school districts, to the character of communities and cultures.
- **knowledge of educational ends, purposes and values**, and their philosophical and historical grounds.

Situated knowledge in teaching

- “Actually, I don’t know how others teach sorting, you, or my colleagues. That is a bit shocking. I don’t know how other people teach something as fundamental as sorting. I know what the algorithm is. And the textbooks. But how do others get students through that?” (SP9)

So what can we do?

- What would it mean for us to have a forum – a community – that allowed us to purposefully reflect on teaching as itself?
- That did not try to make teaching into something else, and did not document it in a decontextualised, abstract way (writing a paper is a *terrible* way to represent teaching).
- What would that look like?

disciplinary
Commons



<http://www.disciplinarycommons.org>

Disciplinary Commons: Aims

- To document and share knowledge about teaching and student learning.
- To establish practices for the scholarship of teaching by making it *public, peer-reviewed*, and amenable for *future use and development* by other educators: creating a teaching-appropriate document of practice equivalent to the research-appropriate journal paper.

Disciplinary Commons: Structure

- A *Commons* is constituted from 10-20 educators sharing the same disciplinary background, teaching the same subject – sometimes the same module – in different institutions.
- Meet monthly throughout an academic year.

Disciplinary Commons

- A *Disciplinary Commons* affords two benefits

Disciplinary Commons

- A *Disciplinary Commons* affords two benefits, participation and reification

Disciplinary Commons: Participation

- In meetings we reflect, we share. We observe, we review.
- We have the deep and meaty discussions about the minutiae of our practice.
- And – although with our underpants on – these discussions are often of a particular kind.
- For, like farming, to be successful, teaching also “ ... requires an enormous amount of tacit knowledge, and understanding about how to make things work in a co-ordinated way, and success has a long time frame.”

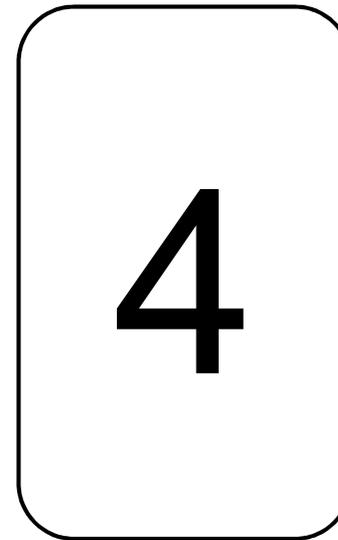
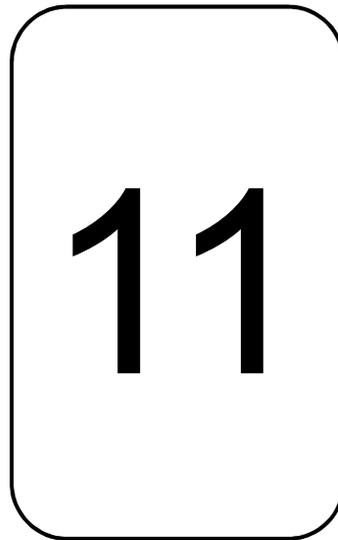
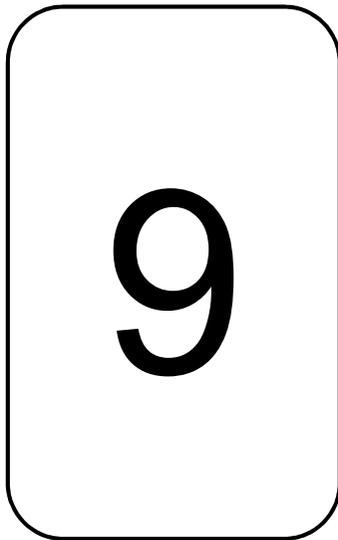
Let me tell you about Bob and Alice

(not their real names)

- An early activity in Alice's intro course is to have students use pseudocode and flowcharts to describe how to select the second largest element of a list.
- Alice: "This section seems really really hard for students"
- Bob: *I mentioned that I thought the logic was quite challenging for students as a first time exposure to selection. I asked her why such nested logic (2 levels for "largest", 3 levels of "2nd largest"), when she teaches selection several weeks later. I asked "what is the point".*

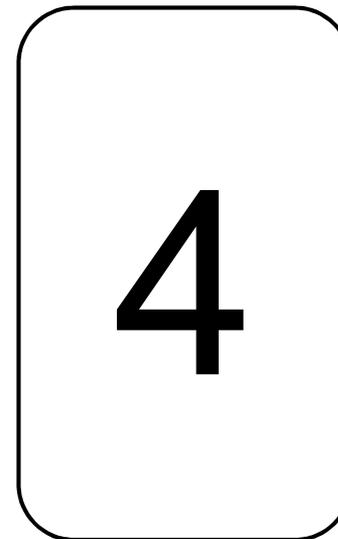
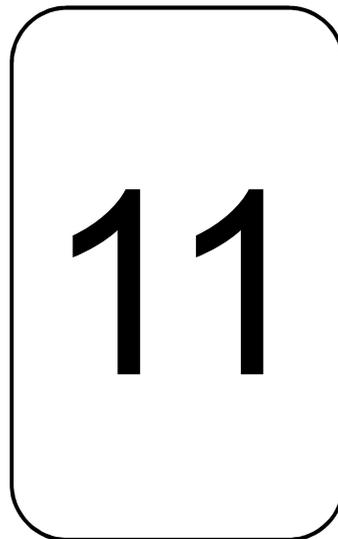
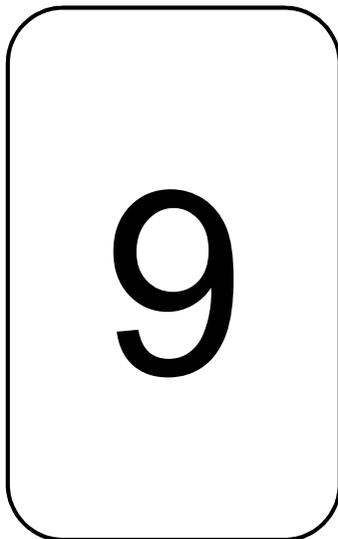
Using “the tools” – pseudocode & flowcharts

- *I suggested that she might want to have students use manipulatives, say, cards with numbers on them. I said, here is how to use them the wrong way.*



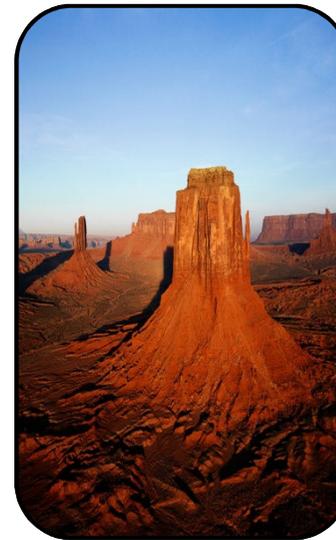
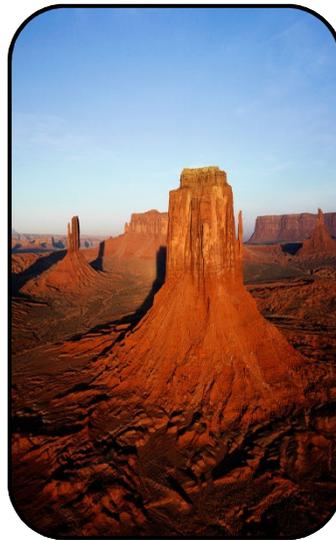
Using “the tools” – pseudocode & flowcharts

- *Ask students to pick the largest of 3 numbered cards, writing down how they did it.*
- *Students will just say "I took the largest".*



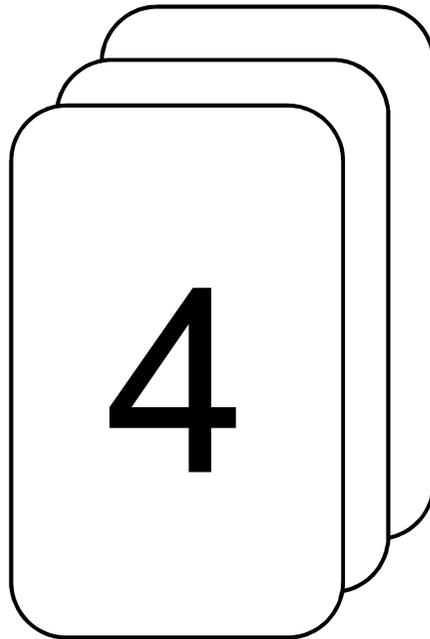
Using “the tools” – pseudocode & flowcharts

- *I said that you have to constrain the task: place the 3 cards face down, and choose the largest of the three when you can have at most 2 up at a time.*



Using “the tools” – pseudocode & flowcharts

- *Or get them to choose the largest when you only hand them out one at a time.*



Using “the tools” – pseudocode & flowcharts

- ... *You could do this in groups: one person doing it and the other person observing and recording process. Then they can discuss the algorithm, try it on other values to see if it generalizes. Then they can do it as a whole class, and you can critique. With this method that they might be able to even do the "2nd largest" -- but you'll have to settle for very rough pseudocode, and certainly not flowcharts.*

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- **knowledge of educational ends, purposes and values**, and their philosophical and historical grounds.

Pedagogical Content Knowledge

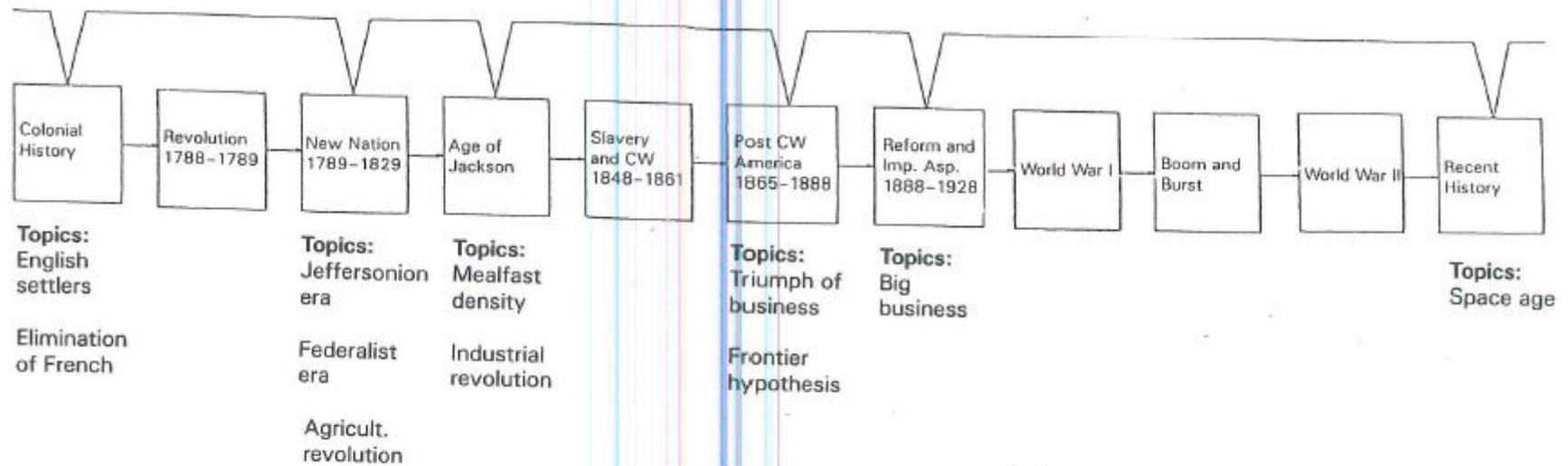
- This conversation emerged from Bob having done this sort of thing, from knowing what students will do and say about learning a particular topic.
- And of course, Alice could understand the response, because she had similarly deep disciplinary experience to draw on as well.
- *This conversation was all about the specifics. In a cross-disciplinary group, you would NEVER have that kind of conversation. You might have other very good and important things to say to one another, but you wouldn't have that conversation, never.*

Teaching competence: Sigrun Gudmundsdóttir

- PCK is not just “increased repertoire” (experienced but not expert).
- Expression of PCK in practice.
- Part of the development of PCK is teachers’ construction of “curriculum stories”, their ways of conveying linkage and meaning to students.

Story: Age of Discoveries

Figure 7.3.
Harry's story about the Age of Discoveries.



Narrative as carrier of expertise

- Curriculum stories make material meaningful for students. They point up what is salient, what needs to be paid attention to, what links with what.
- Curriculum stories can also be shared with other teachers, to articulate content and “take”.

A special form of professional understanding

- It may be – and I suggest it's likely, I'm beginning to believe it's true – that pedagogical content knowledge is *only* transmitted by narrative.
- By disciplinary practitioners talking together.
- Certainly, the disciplinary narrative here bridges the gap between abstract “textbook” recipes to concrete classroom practice.
- And, narrative – not a textbook, not a “best practice”, not a codified and context-free representation – has allowed Bob and Alice to *usefully* share knowledge between institutions.

Commons *participation* elicits narrative

- Because while it's trivial to recognise a story, it is hard to compel their emergence. They naturally arise in response to a situation, either our own or someone else's.
 - War stories are about problems, issues, difficulties and triumphs. They have a need to be told: "Let me tell you what happened to me today ..." and they solicit sympathy and advice: interpretations, counter-narratives, "amen" encouragement. (J. J. White, 1991, p. 251)
- It is difficult (if not impossible) to recreate the *need* to tell a story. Unless it is "present" somehow for the teller, then the response will be awkward and contrived.

Disciplinary Commons: Reification

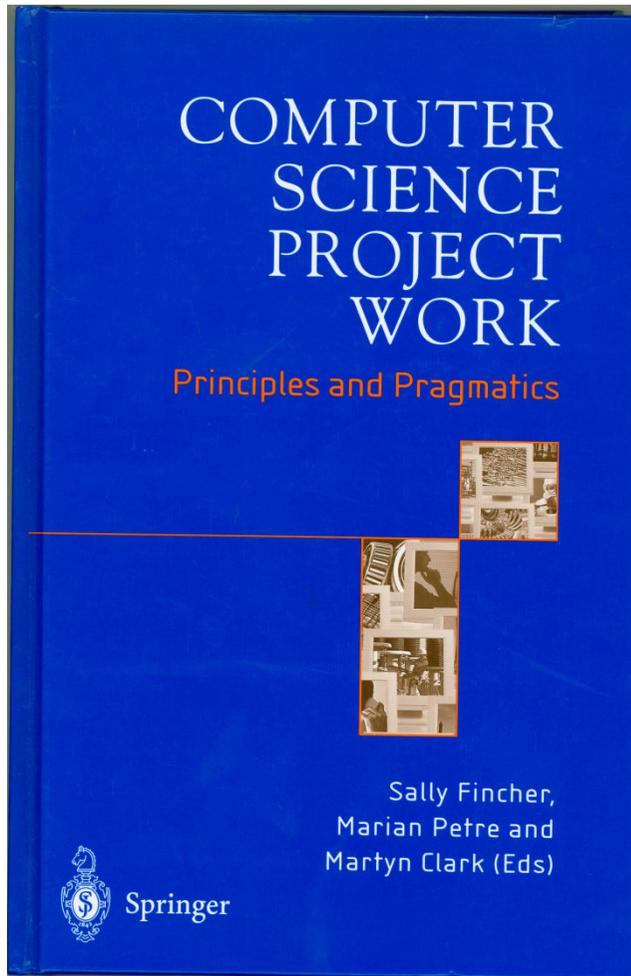
- Documentation of teaching practice is:
 - Rare
 - In non-standard (& therefore non-comparable) forms
- *Commons* portfolios have:
 - Common form
 - Persistent, peer-reviewed deliverable
- Power of portfolios is multiplied when there are several examples available for a disciplinary area
- *Commons* archives provide a rich set of contextualised data

Disciplinary Commons: Portfolio form

- Have six sections:
 - Context
 - Content
 - Instructional Design
 - Delivery
 - Assessment
 - Evaluation

Not the only form – not the only recipe

- Bundles
- CoRe



- Springer
- 2001
- 267 pages
- 46 bundles
- Fincher, Petre, Clark, Utting, Boyle, Mander

EPCoS Bundle Form

PROBLEM STATEMENT	Each bundle starts with a formulation of a general problem to which the body of the bundle is a specific solution.
BODY	<p>The Body of each bundle is presented in a format that shares certain formulaic phrases. These are:</p> <p><i>This Bundle ...</i> A phrase which captures the essence of the practice</p> <p><i>The way it works is ...</i> A description of what is involved (this may be quite short, or many paragraphs long. Occasionally it will be many pages, sometimes including detailed documentation.)</p> <p><i>It works better if ...</i> Key criteria for success</p> <p><i>It doesn't work if ...</i> Watchpoints for unsuitable (or undesirable) situations</p>
SOLUTION STATEMENT	Following the body of the bundle is a general solution which refers back to the initial problem statement. (The solution statement, of course, captures the aim of the body too, because a bundle is itself a specific instance of the general solution).

Bridging the gap

- Bundle *form* and the *formulaic phrases* help structure the singular experience to facilitate sharing
- Narrative “body” helps to connect teller and listener.
- I know that this practice is real—it’s close to the work—it has been developed and deployed “in anger”

Sharing Practice Project

- The form didn't work for everyone.
- Re-purposed for a different group, to reflect their language and needs.



Jack Loughran's CoRe

- An explicit attempt to uncover and represent PCK

Content Representation (CoRe)

- What you intend the **students** to learn about this idea?
- Why is it important for students to know **this**?
- What else do **you** know about this idea (that you do not intend students to know yet)?
- Difficulties, or limitations, connected with teaching this idea.
- Knowledge about the students' thinking which influences your teaching of this idea.
- Other factors that influence your teaching of this idea.
- Teaching procedures (and particular reasons for using these to engage with this idea).
- Specific ways of ascertaining students' understanding or confusion around this idea (include likely range of responses).

ACM Exemplar template (extract)

- Where does the course fit in your curriculum?
- What is covered in the course?
- What is the format of the course?
- How are students assessed?
- Course textbooks and materials
- Why do you teach the course this way?

Disciplinary Commons: Portfolio form

- Have six sections:
 - Context
 - Content
 - Instructional Design
 - Delivery
 - Assessment
 - Evaluation
- Each section consists of an artefact and a commentary.
- Detail and discussion.
- Evidence and narrative.
- What and why.
- Personal, but not idiosyncratic

Benefits of the *Commons*

- All *Commoners* are expert
- *Commoners* work together to discover, interpret and re-interpret new material
- Part of the sharing is cross-institutional peer observation of teaching.
- We gain an unusual depth of knowledge about practice in other institutions. Knowledge normally only otherwise acquired through a process of “charismatic embedding”
- Resultant public documentation is contextual, comparative and collegial – and inevitably one step (or 10, or 17 steps) from singular tacit, embodied experience

Recommendation domain

- Byerlee, Harrington, & Winkelmann, 1982 say:
- “... we have proposed the concept of a recommendation domain (RD) as a group of farmers with roughly similar practices and circumstances for whom a given recommendation will be broadly appropriate. It is a stratification of farmers, not area; farmers, not fields, make decisions ... resulting domains are often not amenable to geographical mapping because farmers of different domains may be interspersed in a given area.”

Bridging the gap

- This narrative knowledge is not a “recipe” – I read a portfolio to find out how someone else taught the course, not to be instructed how I should do it.
- Reading their story allows their experiences to become my own, allows me to gauge what will work for me.
- It supports and builds my own expertise, my own PCK.

Narrative nature of PCK: three facets

- Narrative in elicitation
 - response to situation/story (Bob and Alice)
- Narrative in expression
 - Narrative as the carrier of practical experience and foundation for development of expertise (Gudmundsdottir and Benner)
- Narrative in representation
 - Portfolios (amongst others – see also Bundles, CoRe, ACM exemplar template)

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