

TITLE:

Adult numeracy teacher training programmes in England: A suggested typology.

NAME:

SAI LOO

ADDRESS:

School of Lifelong Education and International Development

Institute of Education

University of London

20 Bedford Way

London WC1H 0AL.

ABSTRACT

Nationally approved adult numeracy teacher training programmes were started in September 2002 following the introduction of subject specifications by the Department for Education and Skills and the Further Education National Training Organisation in England. These programmes delivered by higher education institutions and further education colleges were found to consist of a wide variation of course structure and delivery style.

This article offers a conceptual typological framework to classify the diversity of these programmes. It uses examples of adult numeracy courses drawn from a research project, which investigates the diverse curriculum approaches to teaching the subject specifications, the issues around implementation, and the way that subject knowledge was translated into classroom skills. The typology uses Bernstein's theories on curriculum knowledge, transmission and recontextualization pedagogic processes as a framework to classify and enhance our understanding of the *raison d'être* of this subject area of teacher training courses i.e. teach trainees how to be teachers of adult numeracy.

The article also offers an 'ideal' teacher training course where some of its elements are drawn from best practices identified in the project. Finally, this article might act as platform for practitioners to critically assess how adult numeracy teacher training courses might be structured and classified

Adult numeracy teacher training programmes in England: A suggested typology.

1. Introduction

This article¹ is based on a research project focusing on the new level four² adult literacy and numeracy, and English for speakers of other languages (ESOL) in England. A diverse array of course structure and delivery style was found in training teachers in these subject areas. It uses examples drawn from adult numeracy courses where there are wide course variations. This article discusses a possible method of classifying the diverse approaches of adult numeracy teacher training courses in the post compulsory sector in England, which may also be relevant to other teacher training courses in this sector. It provides an overview of the research project before discussing Bernstein's theoretical frameworks on course typology for post compulsory teacher training programmes. It then discusses the types of course structure and delivery style in the context of Bernstein's theories with the help of exemplars. An 'ideal' teacher training course is illustrated incorporating best practices found in the research.

In September 2002, the Department for Education and Skills (DfES) and the Further Education National Training Organisation (FENTO) (DfES and FENTO 2002) introduced subject specifications for adult numeracy and literacy alongside the existing generic Teaching and Supporting Learning standards (known as generic teaching standards). This is a significant move in two respects. One is that it is the first time in England that teachers of these two subject areas have the opportunity to gain a teaching qualification that is specific to their taught areas. Previously, teachers of adult numeracy or literacy would have to take a generic teacher training qualification like any other potential teacher in this education sector. Those joining a generic course would have a degree or its equivalence in a relevant subject. Two is it provides a good opportunity to evaluate the diverse variations of teacher training courses, both existing and new, in the post compulsory sector and to classify them in

¹ Only the author's views are reflected in this article.

² A level four programme in England is equivalent to the first year of a first degree at university.

order to gain greater understanding of these courses.

2. The research project

The broad aims of the research project³ were to investigate the diverse curriculum approaches to teaching the subject specifications, the issues around implementation, and the manner in which subject knowledge was translated into classroom skills.

Having ascertained the list of level four adult numeracy courses from FENTO, an initial mapping exercise of the courses was carried out to categorise the course types and regional locations in England. The criteria for a sample of ten courses included geographical spread, course types, and delivery institutions of FE and HEIs. Once a sample has been ascertained and with the agreement of delivery institutions, course documents and related evidence were requested. These were perused before the start of fieldwork.

The three methodologies employed in this project were qualitative, quantitative and 'Practitioners' Sessions' (PS). For the qualitative method, seventeen adult numeracy trainers were interviewed on a one-to-one basis whenever possible, using a semi-structured approach. Trainees were interviewed in focus groups and the numbers interviewed in each group varied from three to ten. Eighteen groups took part. The project aimed to interview the same focus groups twice during the course. Where this proved to be impossible due, for instance to the shorter duration of the course, which was not initially anticipated, a group from the same course was interviewed. The interview topics focused on the main questions of the project.

An additional approach, which aimed to investigate in greater depth the issue around how subject specifications and generic teaching standards were brought together in order that the trainees could be taught how to be teachers of adult numeracy, was the

³ The team comprised of Norman Lucas, Helen Casey, Sai Loo, Jeremy McDonald, Olivia Sagan and Maria Koutsoubou. It was funded by the National Research and Development Centre for adult literacy and numeracy (NRDC), which along with the team members were based at the Institute of Education, University of London. The report entitled 'Towards a professional workforce: adult literacy, ESOL and numeracy teacher education 2003 - 05' was published by the NRDC in 2006.

‘audit trail’. Two or three topics of mathematics content were chosen from the subject specifications and both trainers and trainees were asked how these were covered and assessed on the course and in teaching practice. A subject adviser was appointed to assist the research team on specific matters relating to the relevant subject area, which included the choice of the numeracy topics.

For the quantitative approach, seventeen staff or trainers were asked to complete two questionnaires – at the start and at the end of the course. For the one hundred and forty-two trainees, they were asked to complete three questionnaires – at the start, during and at the end of the course. The first staff and trainee questionnaires were focused on ‘quantitative’ data collection of the participants in terms of past teaching, employment and life experiences along with gender, age, qualifications and related issues. The second staff questionnaire concentrated on their perceptions of their courses including strengths and weaknesses and critique of subject specifications. The remaining two trainee questionnaires focused on issues relating to teaching of the curriculum, assessments, teaching practice, course structure and implementation and subject specifications.

The PS approach related to bringing together trainers who were involved in this project to discuss preliminary findings arising from this project and follow-up findings from a previous one-year project (Lucas, Casey, Loo, McDonald & Giannakaki 2004), to network, and to consider points of shared interests amongst researchers and practitioners. The findings are based on analysis of the data from the three methodological approaches adopted in this project together with triangulation of evidence from course documents.

3. Bernstein’s theories and their applications to teacher training courses

Bernstein’s theories on knowledge types, pedagogical practices which deal with how curriculum is taught and how a trainee translates and applies it in her own classes, and various delivery styles are relevant to investigating how a teacher training course is structured and implemented. After all, such a course aims to train its participants to be teachers of adult numeracy.

Bernstein used codes, elaborated and restricted, to understand the relationships between different classes in society. He wanted to explain why those from working class were disadvantaged compared to those from middle class. From Sadovnik (Power et al 2001), Bernstein used his code theory to examine pedagogic practices in schools which included: the type of knowledge (curriculum) to deliver to students, the manner in which it was taught (transmission), and the methods in which knowledge was evaluated (evaluation/performance).

Knowledge, according to this educationist (Bernstein 2000), consisted of two varieties – horizontal and vertical. Horizontal knowledge is related to everyday, is verbal and has context, a tacit nature and locality. Its acquisition is via peer groups and at work. This type of knowledge is not easily translated. Vertical knowledge is knowledge, which is explicit, coherent and systematically structured. It has its own acquisition and transmission rules and is mediated by the recontextualization process, which will be explained below.

From a stand-alone adult numeracy teacher training programme, vertical knowledge is content that is found in curriculum i.e. adult numeracy subject specifications. In the case of a joint programme, curriculum includes the subject specifications as well as the generic teaching standards. Horizontal knowledge relates to the past teaching, employment and life experiences of a trainee. There are criticisms to the two definitions of knowledge. Take for example, a trainee with the appropriate level of mathematics knowledge (which was vertical knowledge) who enrolled on a joint programme, would this be classified as horizontal knowledge since it was acquired whilst the person was an apprentice in an engineering firm (i.e. with specific location and context)? One might also suggest that it could be a form of past vertical knowledge as the mathematics knowledge was acquired in the past or even a mixture of both types of knowledge.

Transmission is Bernstein's second phase of his pedagogic practices. This phase looks at how knowledge is transmitted to the trainee and how this knowledge is acquired and related to trainee's teaching in her classes. Bernstein saw the recontextualization process as a way of relating curriculum (i.e. the 'what') and transmission (i.e. the 'how'). He (Bernstein 1990 pp 184) defined this process as one "which selectively

appropriated, relocates, refocuses, and relates other discourses to constitute its own order and orderings”. He (Bernstein 1990 pp 185) went further to indicate the rules surrounding this process. “The recontextualization rules regulate not only selection, sequence, pace, and relations with other subjects, but also the theory of instruction from which the transmission rules are derived”.

The educationist provides guidance on course implementation with recontextualization process. It is to do with how the subject specifications and generic teaching standards are selected in terms of what to teach, the order in which they are taught, the time that is required to cover the curriculum, and how the different parts of the subject specifications are related to each other and to generic teaching standards. Also, the past knowledge and experience of trainees – horizontal knowledge – needs to be considered in the teaching process as this will affect the pacing, the selection and coverage of curriculum and appropriate facilities for accredited prior learning (APL).

He suggested two fields of recontextualization – an official recontextualizing field (ORF) and a pedagogic recontextualizing field (PRF). With the ORF field, it is created, in the case of adult numeracy, by the government and its related institutions. These institutions are the DfES and FENTO as they have published the adult numeracy subject specifications and the generic Teaching and Supporting Learning standards. With the PRF field, it is made up of trainers/staff on the adult numeracy courses, writers of textbooks and curricular guides who are involved in the pedagogic delivery in FE colleges and universities.

The transmission process, besides including part of the recontextualization process, also deals with how content is taught. Bernstein offers two approaches. One relates to the manner in which the content is taught i.e. sequentially or in parallel. The other relates to the approach of the trainer i.e. explicitly or implicitly. According to him (Bernstein 1977), content could be taught sequentially which meant that one part of the curriculum was delivered after another part i.e. in sequence. By extending this notion, the opposite approach might be in parallel. This meant that different contents could be taught in different sessions but alongside each other during the same timeframe e.g. academic term. Thus in terms of a joint programme, a sequential

approach might be subject specifications taught after generic teaching standards. In a parallel approach, subject specifications and generic teaching standards are taught in different classes but in the same three terms over an academic year.

The other approach relates to explicit or visible and implicit or invisible pedagogies. An explicit approach, based on Bernstein (1977), meant that a trainee (acquirer of curriculum knowledge) was aware of or had knowledge of the content that was taught. The trainer would mention what parts of the curriculum were being covered in the sessions. An implicit approach meant that a trainee teacher would not be aware of which parts of the curriculum were being taught in her sessions and thus would not be able to distinguish which parts of the subject specifications and teaching standards were being delivered. The transmitter or trainer would not mention the parts of the curriculum that were being covered in his sessions. Nor will the trainee know of her progress either.

The last pedagogic stage relates to evaluation or performance. Bernstein (1990) viewed this as fundamental in ascertaining whether a trainee had understood and recontextualized the curriculum knowledge and that she could apply it to her own classes. Thus this stage relates to how content can be assessed. The methods may include portfolio gathering, observations, simulated teaching, reflective logs, assignments, and examinations to name a few.

The three stages advocated by Bernstein are not directional and indeed a trainee with past teaching experiences may begin from the performance stage and 'move' towards the curriculum stage to acquire curriculum knowledge and recontextualizing her new knowledge to perform (teach) in her classes. The stages are also not distinctive and the recontextualization process straddles curriculum and transmission stages. Supporting the three pedagogic stages are the two styles of deliveries – sequential or parallel and explicit or implicit.

There may be criticisms to Bernstein's theories that are related to course structure and delivery as indicated previously with horizontal and vertical classification of knowledge. They also offer a broad sociological view of reproduction of power in relation to education and society. But these theories were written for schools and not

post compulsory education sector and thus their applicability would have to be questioned. Also, the recontextualization process lacked detail explanation as to how the vertical (curriculum) and horizontal (trainee's past experiences) knowledge could interface in delivery terms in the transmission stage. Thus the next section attempts to relate his recontextualization process in the teaching of adult numeracy in post compulsory sector.

4. A course typology

This section discusses the variations found in the research sample in terms of course structure, duration, taught hours and trainers' experiences and how they impact on the course typology, which relates to the delivery approaches of modules and recontextualization process.

The sample of courses used in the project was drawn initially from FENTO. A sample of ten courses was initially envisaged over the one-and-half year period of the research. After some investigation, it was found that some courses were of shorter duration than one academic year and in those instances, two courses running over the project life were used. Also, some institutions were offering related subject courses (joint and subject specific) and these were included in order to obtain a larger sample within the same number of delivery institutions. Seventeen level four adult numeracy courses were interviewed in the sample involving nine teaching institutions in England – four from further education (FE) colleges, and five from higher education institutions (HEIs). Of the seventeen courses, eight were joint courses (all taught at HEIs) and nine were subject specific courses. Out of the nine subject specific courses, seven were taught by FE colleges and two by HEIs. Nine English regions were represented in this project.

Two types of courses were found in the initial mapping exercise namely: joint and specific. In theory, specific, in-service or stand-alone courses are those, which teach subject specifications to those trainees who are already teaching and with generic teaching qualifications. An example of such courses is the Certificate in adult numeracy subject specific (Cert. in AN). Joint or pre-service programmes, in theory, are those, which teach subject specifications and generic teaching standards to

trainees with no relevant teaching experience or level four mathematics knowledge. Examples of these courses include Certificate of Education in adult numeracy subject specific (Cert. Ed.) and Post Graduate Certificate of Education in adult numeracy subject specific (PGCE).

In practice, the research found that candidates with or without course prerequisite requirements were found in the two types of courses. An example was that trainees with no generic teaching qualification were enrolled on specific adult numeracy courses. There would be implications as regards how the course could cater for trainees, as they would be required to teach adult numeracy without a teaching qualification and relevant teaching experience. Also there was no taught module for the generic teaching standards on the course, as it was a subject specific one. It was suggested by one of the trainers on the programme that such trainees could either obtain a teaching qualification after completing the current course or enrol on a generic teaching programme alongside this. In fact at another subject specific course, a trainee with no teaching qualification did enrol on a generic teaching programme and she found it punishing to juggle two courses, teaching load and family life. However, the skills and know-how from the generic teaching course complemented her adult numeracy course well.

For those trainees with relevant mathematics knowledge gained from past qualifications or professional employment enrolled on adult numeracy (stand-alone) courses, the research found that delivering institutions were not geared up to offering accredited prior learning (APL) facilities. The same situation existed for those trainees with a generic teaching qualification in joint courses. Perhaps, the newness of these level four programmes meant that delivering institutions were not geared up to offering APL facilities. The unintended consequence of previous two examples was that the trainees could help their peers with their relevant experience and know-how. This was voiced in several focus group interviews.

There were variations in the duration (in both length and number of taught hours) and structure (in terms of number of modules/units) of courses and related to that the pacing and sequencing of content coverage. For the eight joint courses, they differ from one academic year to two academic years for a Cert. Ed. programme. A typical

one-year Cert. Ed. university-based course from the research findings offered 180 taught hours with a popular configuration of three modules on generic teaching standards and three on subject specifications. A two-year Cert. Ed course had 450 taught hours excluding teaching practice hours. This programme offered three modules on generic teaching standards and four on subject specifications, one of which related explicitly to recontextualization process. Related to the previous Cert. Ed. programme, the three-year PGCE programme would offer over 450 taught hours with two extra modules that were linked to action research and research methodologies, totalling nine modules.

Of the nine subject specific courses in the research sample, they varied from six months to one year. In terms of taught sessions in hours, the most popular approach was 90 hours with 30 hours of teaching practice. Excluding the teaching practice module, these courses offered a variation in the number of modules from one to six. In spite of this apparent variation, all the subject specific courses cover the same subject specifications and the variation is purely an institutional approach as to how the specifications are divided for teaching purposes only. It does not, however, imply a greater or lesser coverage of the subject specifications. The only exception was found at a university delivered programme where the trainees were offered 110 hours of taught sessions alongside the 30 hours teaching practice requirement. It had three modules, excluding the 30 hours teaching practice requirement, with two devoted to coverage of subject specifications and one to teaching trainees how to be teachers of adult numeracy.

An interesting corollary to the above variations is the feedback from trainees. Their comments on the level of numeracy content from focus groups and qualitative data (Questionnaire Three) pointed to the same conclusion. They found the mathematics level difficult generally from interviews. In Questionnaire Three, 70% of the 44 trainees who took part found the courses were pitched at a level which were 'in many or some parts of the course to be too demanding/difficult'. On whether trainees had time to think and discuss with peers, colleagues and tutors, they commented from interviews that generally they found that interacting with peers were most helpful. From a quantitative perspective, basing on Questionnaire Three, overwhelmingly they indicated that they had time to discuss the subject.

“I enjoyed the reflection and discussion with peers - this was by far the best part of the course.”

“Reflection and discussion were more outside the teaching time.”

“In the break times there were a lot of useful networking, sharing of experience etc. Friday afternoon can limit the extent to which people want to discuss things - end of a long week and people want to get home.”

“The group was a very supportive and friendly group. We discussed and reflected issues at breaks, during the sessions and before - as quite a few of us arrived early. We also had email and phone contact with each other, including the staff.”

Perhaps there needs a qualification on Questionnaire Three results: only 44 out of 142 adult numeracy trainees in the research sample (or under 31%) participated in this questionnaire, and those who took part in this questionnaire i.e. who completed or near completion of the course might have a ‘different’ view to those who have not participated.

Coming to trainers’ teaching experiences and qualifications, the research study found that those with a combination of: appropriate level four mathematics qualification, teaching experiences in teacher training programmes and adult numeracy teaching experience in a variety of teaching settings like adult community institutions, prisons, FE colleges are few in numbers in England. Very often, courses have lecturers who can only satisfy some of the above criteria. Again, this illustrates the early stages of professional development of this subject area. The scarcity of trainees with all the relevant experiences will have an impact on the teaching of their trainees to be teachers in adult numeracy.

Bernstein (1990 pp 185) viewed the recontextualization rules as not only regulating “selection, sequence, pace, and relations with other subjects, but also the theory of instruction from which the transmission rules are derived”. The diagram below offers a typology that is based on the timing of how the subject specifications and generic teaching standards are delivered i.e. in parallel or sequentially, and also the way in which theory of instruction is carried out that engages the trainees with the generic teaching standards, subject specifications and their previous know-how and skills.

Thus the rationale for this typology revolves around how the courses teach trainees to be teachers of adult numeracy. This can be approached explicitly or implicitly by way of specific module to assist the process of recontextualization or on an ad hoc basis during coverage of subject specs on subject specific courses and also in generic modules on joint courses.

Insert Figure 1

The diagram above is divided into four sections with the horizontal axis relating to the delivery style of course modules either in parallel (left hand side) or sequentially (right hand side). The vertical axis denotes the existence of the recontextualization process either explicitly or implicitly as described by Bernstein (1990) where the top point signifies ‘complete’ recontextualization taking place on a course and the bottom point signifies no such process happening on the course. It is worth pointing out that this form of course classification is not meant to be accurate and placing a course on any of the four sections is thus estimation. There is also room for a course to ‘move’ from one section to another if there are changes regarding module delivery and/or teaching trainees to be teachers of adult numeracy. What it intends to do is to provide users of adult numeracy teacher training programmes with a conceptual framework that relates a teacher training course with the essence of its existence i.e. to teach trainees to be teachers of adult numeracy.

Section One refers to courses which have the recontextualization process and that adult numeracy subject specifications and generic teaching standards are taught in sequence i.e. the specification and teaching standards are delivered one after another in different time frames like terms or academic years. From the point of view of recontextualization, included with the course contents i.e. subject specifications and generic teaching standards were either explicit or implicit approaches to show trainees strategies, methods and examples of how to be teachers of adult numeracy. Explicit approach is where a trainee is made aware of the elements of subject specifications and generic teaching standards (curriculum or the ‘what’ according to Bernstein) and is also aware of her own progress. This explicit approach together with strategies that enable a trainee to be a teacher of adult numeracy (transmission or the ‘how’ according to Bernstein) form the essential elements of recontextualization. Implicit

approach is one where a trainee is not aware of the different elements of neither the two contents nor her progress on the course. A ‘stronger’ recontextualization process occurs where there is a specific module on the course that allows it to take place. A ‘lesser’ process may occur on an ad hoc basis where the process takes place during delivery of subject specifications and/or generic teaching standards.

Three examples of adult numeracy courses that fit in this section include two subject specific programmes and a joint programme. This first Certificate for Adult Numeracy Subject Specialist course was conceived by a university with over two decades of experience in adult teaching. It was a one-year part-time programme in collaboration with a local further education college. The course offered a sequential approach since it had six trainees with teaching experience and/or generic teaching qualifications already. It had 110 taught hours with the usual 30 hours of teaching adult numeracy on top. According to the Course Leader, it “aimed to encourage widening participation and subscribed to the Skills for Life those. It also wanted to make mathematics interesting for trainees and to link the subject specifications with adult numeracy teaching to the trainees’ adult students.”

Of the three modules, the first one was devoted to coverage of subject content using practical applications and real life examples. The second module concentrated on recontextualization process where the trainees aimed to develop their professional practice, apply mathematics knowledge to adult numeracy pedagogy, and acquire and use a range of teaching strategies to their adult learners. It did that by drawing on practical teaching experience of trainees and their empathy with their students. It also included selecting, evaluating and adapting teaching and learning materials for adult learners of different level. The final module covered the social and personal factors of the subject specifications.

The major strength of this course is that it deals with the issue of how to teach trainees to be teachers of adult numeracy by devoting a specific module to this. It uses an explicit approach where trainees know elements of subject content and progress. Despite more taught hours than its equivalent courses, both trainers and trainees felt that more time was needed to cover the specifications adequately. It could also do with greater support like online, pre-course work, reading materials before the start of

the course.

The second subject specific course in this section was accredited by awarding body and delivered by a further education college. This was delivered over an academic year with the usual 90 hours of taught sessions plus 30 hours of teaching practice. Coverage of the subject content was divided into six modules: two on social and personal factors and four on mathematics content. Trainees on entry had a working knowledge of the Core Curriculum (which was adult numeracy at level one) and appropriate teaching qualifications. Findings from the first cohort of trainees and trainers indicated that there was little flexibility from the awarding body to assist the trainees in training them to be teachers of adult numeracy besides covering adult numeracy subject content and carrying out teaching practice.

With the second cohort, the trainers rationalised the subject coverage and devoted eight sessions to recontextualization process. These sessions included problem solving, ways of subtracting and adding, and peer interaction to learn from each other. One trainee also suggested that by ‘examining mathematics in a deeper way helped me to teach others’. This was a concerted move by trainers and the first cohort of trainees’ final evaluation since there was no requirement from the awarding body to help the trainees to recontextualize their past knowledge, teaching know-how and skills, and mathematics knowledge. The trainers also felt that adult numeracy as a subject was perhaps more difficult to relate subject specifications to teaching and learning unlike some other subjects like adult literacy.

This course imaginatively used the existing course structure to create eight sessions to help its second cohort of trainees to recontextualize. One might suggest that from the view of classification of this course, it has moved from section 2 to section 1. It was done in an explicit manner as subject content was covered in sessions other than those eight lessons.

The third example in this section relates to a joint course, PGCE in adult numeracy subject specific. It is a three-year part-time course with over 450 taught hours. It includes three modules on generic teaching standards, three on subject specifications, one on recontextualization and two on action research. The course planners saw the

recontextualization module as a necessary element of this teacher-training programme. Its ethos includes providing a sense of professionalism to its trainees over and above a set of competences around the teaching standards requirements. It is also about having awareness of national, regional and local contexts of the subject, preparedness for constant explicit learning and acceptance for criticism, and willingness to take a wider view of teaching.

Some of the trainees on this course reinforced this vision by acknowledging that they had a wider view of mathematics and that they could talk more as their knowledge had been extended. They felt more confident as teachers and that their adult learners had a bigger mathematics picture as a result. The one improvement, which the trainees wanted to see, was that both the generic teaching standards and subject content ought to be delivered in parallel as that this would help more in their recontextualization process.

Section Two refers to a course where there is minimal allowance for recontextualization to take place and that subject specifications and generic teaching standards are delivered sequentially. In the case of a Certificate in Subject Specialist course, in theory, the generic teaching knowledge and skills are acquired before entering the course and that a trainee is taught the subject content during the course without linking content and teaching knowledge.

An interesting example is a Certificate in Adult Numeracy where in practice a trainee joining this course is not required to have a generic teaching qualification (contrary to the awarding body's pre-requisites requirements). It was accredited by an awarding body and taught by a further education college. This one-year programme delivered the subject content over six units in 90 hours with the standard 30 hours of adult numeracy teaching practice. The subject content was taught sequentially either after or before depending on whether the trainees entered the course with a generic teaching qualification or not. Due to this variation of trainees' teaching knowledge and skills, there would be implications in terms of coverage and pacing of subject specifications and how the specifications could be linked with the generic teaching standards and teaching practice – in short, recontextualization process. To complicate matters, a few of the trainees were also enrolled on a generic teacher-training

programme. Thus for these trainees, the two sets of specifications were covered in parallel. Due to the strict adherence to the awarding body's subject specific course structure, unlike the subject specific course in the previous section, this programme covered the subject specifications and provided teaching experience in the subject but not suggested approaches and strategies to contextualize these skills and knowledge to enable its trainees to use them coherently in their classes. The course deliverer reinforced this by the statement, " this course does not teach trainees how to deliver numeracy."

Sections Three and Four are treated together where Section Three contains courses where there are little or no allowance for recontextualization process to occur and that subject specifications and generic teaching standards are taught in parallel. In Section Four, courses offer varying degrees of recontextualization, either explicitly or implicitly. In Sections Three and Four, both contents are taught in parallel. Examples of these courses may include PGCE/Certificate of Education (Cert. Ed.) adult numeracy subject specific programmes where they show varying degrees of how to teach trainees to be adult numeracy teachers where adult numeracy specifications and generic teaching standards are taught in the same timeframe like a term or an academic year but in different classes. Of the eight joint courses in the project sample, six fit in these two sections with varying degrees of recontextualization and the two contents are delivered in parallel. They tend to cluster in the horizontal axis of Sections Three and Four. An example of a joint programme - Cert. Ed. adult numeracy subject specific course - is described below.

It has three units on the generic teaching standards and three units on the subject specifications. One from each of the two contents i.e. generic teaching standards and subject specifications units are covered in a term. Thus they are taught in parallel. The duration of the course is one year. The course follows the generic teaching standards and the adult numeracy subject specifications issued by FENTO. It does not have a specific unit/module for recontextualization but this is taught on an ad hoc basis in the taught sessions. Its trainees have questioned the effectiveness of the course, despite their insistence of the high quality of teaching by trainers. This questioning might be a result of the absence of a unit to bring together knowledge and skills of the teaching standards and subject specifications with comments such as:

“A lot of my previous training in adult literacy could be applied to this course.”

“I would like to know more about common problems of overcoming numeracy, guidance and help in strategies, and how to introduce chalk and talk in sessions which are related to specific parts of the maths content like fractions and algebra.”

“What would be useful would be for the trainers to provide us with coping strategies like what if there was no resource base to store teaching resources especially in places like a community college. I would like strategies of real-life scenarios not the ideal lesson or teaching environment.”

The trainers felt that it would enhance the effectiveness of the course if there were an explicit requirement to show how the recontextualization process could be built into the programme.

The above course examples in the four sections provided a flavour of the diversity in adult numeracy teacher training programmes from the project. Diversity appeared in forms relating to: awarding bodies (HEIs and non-HEIs), teaching institutions (HEIs and FE colleges), joint and subject specific courses, duration of courses and number of taught hours, number of modules/units, past experience of trainees and trainers in terms of academic qualifications, teaching qualifications and experiences, and employment and relevant experiences. Even within a section, there are variations as indicated by the examples in Sections One and Two.

Bernstein’s theories of recontextualization, and explicit and implicit pedagogical approaches provided such diverse courses a conceptual typology to understand them from the perspective of a course deliverer. This typology focuses on the *raison d’être* of any teacher-training programme, which is to train trainees to be teachers in their chosen area. One might envisage a wider use of this typology to other teacher training courses like adult literacy, ESOL and generic programmes.

5. An ‘ideal’ adult numeracy teacher training course

This section provides a sketch of an ‘ideal’ teaching-training programme using the elements that have been mentioned above and good practices uncovered from the

research project. It is for a joint adult numeracy course with no issues of funding (preferably a three-to-five year national funding structure will provide the sector with a period of stability) and accessing appropriate human and physical resources. There are two reasons for choosing a joint course as opposed to a subject specific one. First is a joint course will offer a trainee a better all round training approach where mathematics content can be related to teaching knowledge and skills in a coherent manner. Second is, in the longer term, there will be a need for future trainees, with no teaching qualifications or experiences and possibly subject knowledge this field, to be trained where subject and generic teaching knowledge and skills are to be contextualized to enable them to be teachers of adult numeracy. However, in the short term, there is an urgent need to train those with teaching experience but not necessarily subject knowledge.

Thus in an 'ideal' joint course, a trainer should be an initial teacher trainer with level four adult numeracy qualifications, a relevant mathematics related degree and a higher academic qualification in education. She should have teaching experience in adult numeracy in various teaching settings e.g. FE, prisons, and outreach schemes. The course ought to be supported by adequate resource materials, conducive learning environment and supportive administrative and funding resources.

The course is responsive to a trainee's past teaching and other relevant experiences after a pre-enrolment taster session, interview, diagnostic and course information pack. A trainee has her own learning scheme over a six-term full-time or a nine-term part-time course. This duration will enable a trainee time to understand, think and apply the subject specifications and teaching knowledge and skills in simulated and real-life teaching sessions. This programme aims to engage a trainee with a professional approach beyond the current requirements from subject specifications and generic teaching standards.

The course has one large subject specifications core module, which is delivered in parallel with teaching skills core module over the duration of the course. There are separate modules of shorter duration that cover areas that: facilitate peer interaction and disseminate teaching practices and strategies in order to 'teach a trainee how to be a teacher of adult numeracy', produce learning and teaching resource that is useful in

practice teaching classes, investigate wider issues surrounding the profession like local and regional experiences of adult basic skills provision and diversity of teaching settings, relate to relevant research and development projects, discuss international, historical and other education sector perspectives outside the scope of the subject specifications and teaching standards, and carry out action research on a trainee's area of interest that is related to adult numeracy with teaching input on research methodologies. Such a modular approach will provide flexibility with different specialist pathways and efficient use of course resources with regards to trainers, accommodation and learning resources to name a few. This needs to be supported by a robust tutor system in order that a trainee optimises her individual learning experience. There should be a strong partnership between the teaching institution and teaching practice institutions with a robust mentoring system in place, which would feed into the theoretical and practical aspects of the course.

This course offers an explicit pedagogical approach, as a trainee knows the contents of the subject specifications and teaching standards. It is integrated since the modules link up the two contents in a meaningful and joined-up fashion. It also allows a trainee time to critique the two current contents.

In the real world, there will be constraints in such areas like funding, trainers with appropriate expertise, appropriate number of trainees to allow a rich selection of modules, a workable tutor-trainee system and a supportive mentoring system in teaching practice colleges.

6. Summary

This article uses the diversity of adult numeracy teacher training courses encountered from a research project and Bernstein's theoretical frameworks to offer a conceptual typology for teacher trainers⁴. It offers examples of courses to illustrate the sections in this typology that focuses on training trainees to be teachers in adult numeracy. The article also provides a sketch of an 'ideal' course using Bernstein's theories on

⁴ I would like to acknowledge my gratitude to Andrew Brown who generously gave up his time to talk about Basil Bernstein and to Norman Lucas who had been supportive of my career as an academic.

recontextualization and pedagogical approaches.

The article also provides a platform to assess critically how an adult numeracy teacher training course maybe structured and classified, and that a debate on this area of adult learning be started in England.

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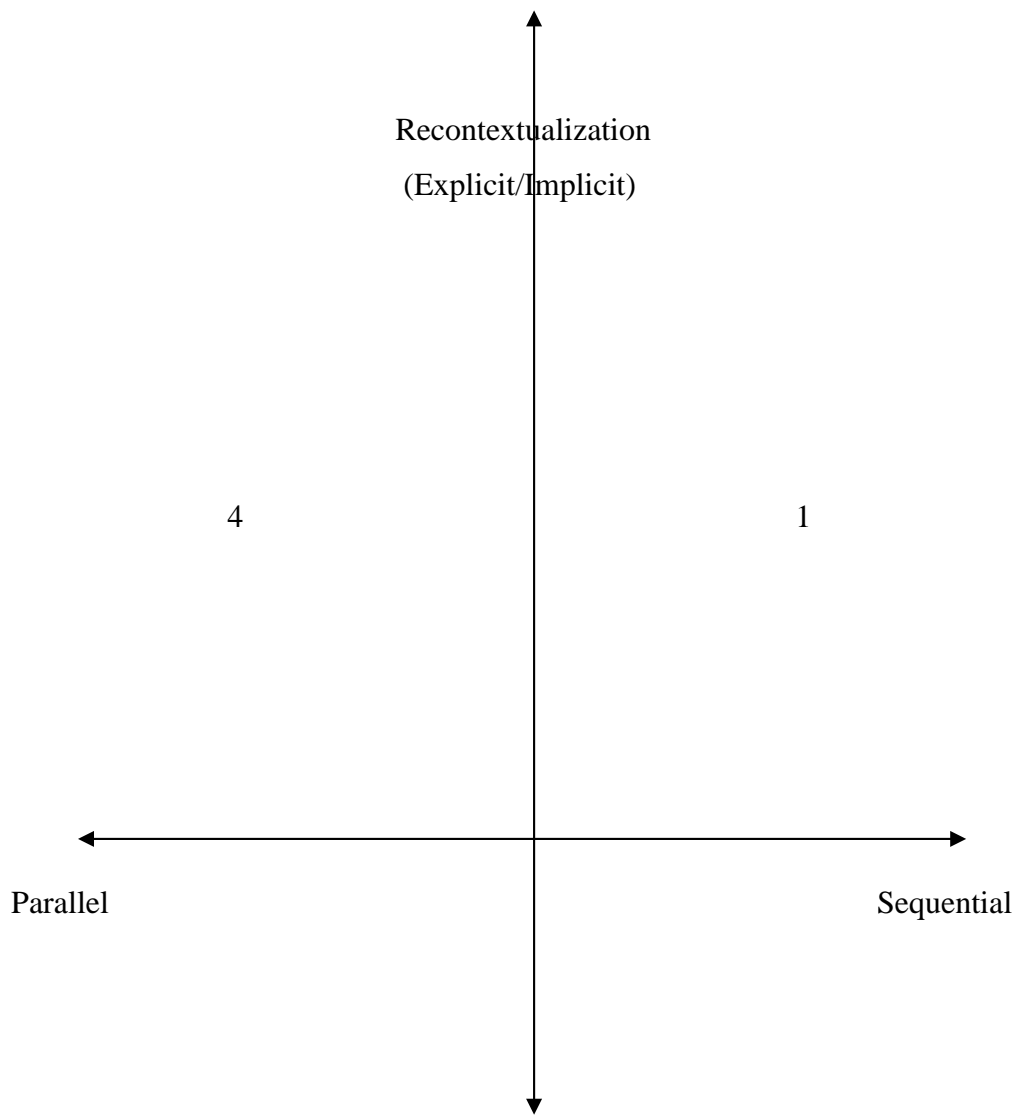
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Figure 1. A typology of adult numeracy teacher training courses in the post-compulsory sector in England.



3

2

No Recontextualization