

OCR Teaching in the Lifelong Learning Sector – Qualification Units

Unit 38 - Level 5 Curriculum Development for Inclusive Practice (Numeracy)

Level 5

QCA Accreditation Number Y/500/9967

Unit description

Unit aims

The aim of this unit is to develop knowledge and understanding of the issues and implementation of inclusive practice in numeracy teaching and learning.

Credit value 15

Unit synopsis

This unit is about:

- Issues of equal opportunity and diversity in the numeracy curriculum
- Theories, models and principles of numeracy curriculum design
- The impact of context on the numeracy curriculum
- The impact of social, economic and cultural differences on teaching, learning and achievement in the subject specialism of numeracy
- Self evaluation of implementation of inclusive practice in own curriculum design and delivery
- Planning own professional development in respect of these issues.

Examples of teaching and learning strategies

The following teaching methods and learning strategies are appropriate to the delivery and development of the knowledge, understanding and skills covered in this unit. A variety of these should be used to provide a model of good practice to the candidate. This list is not exhaustive:

- Small group discussion
- Directed study and research
- Lecture
- Resource based learning
- Question and answer
- Micro teaching session
- Role play
- Discussion
- Lecture and exposition
- Presentations
- Workshop activities
- Tutorials

Guidance on delivery for centres

For many candidates this may be the first opportunity to explore in depth the principles and models of curriculum design and to understand the significance of equality and diversity within the curriculum.

Appropriate methods of delivery:

- Provision of individual learning plans
- Provision of guidance on the qualification and progression routes to further development
- Provision of opportunities for learning e.g. discussion, tutorials, workshop activities etc
- Provision of ongoing mentoring to the candidate, including review and feedback on learning experiences and development of competence
- Observation of peer-to-peer discussions of groups of candidates or of discussions with colleagues
- Observation of candidates working within a partnership
- Professional discussion with the assessor will test the knowledge requirements, where these are not already met through the activities described above.

Guidance on assessment for centres

The assessment can include:

- Written assignment
- Case studies
- Research projects
- Candidate assessments
- Individual learning plans

- Lesson plans
- Written review of candidates' progress

This is a level 5 unit and thus the candidate must demonstrate complex skills and knowledge in this particular area of numeracy. The ability to recognise and develop thinking across these criteria is to be encouraged but it does mean that written evidence whilst aiming for succinctness and clarity of thought will need to be of sufficient depth and breadth to meet the level 5 standard. There is an expectation that the written work will be presented at the appropriate level.

Suggested reading

The following list is not intended to be exhaustive, but provides suggested texts which student-teachers may find helpful. It is not compulsory for students to read all publications in the list; they are identified for reference only.

Benn, R. (1997) *Adults Count Too – Mathematics and Empowerment*. London: NIACE.

Bloomer, M. (1997) *Curriculum Making in Post-16 Education* London: Routledge.

Buxton, L. (1981) *Do you Panic about Maths? Coping with Maths Anxiety*. London: Heinemann.

Chinn, S.J. (2004) *The Trouble with Maths, A Practical Guide to Helping Learners with Numeracy Difficulties*. London: Routledge.

Coben, D. (2003) *Adult Numeracy: Review of Research and Related Literature*. London: NRDC.

Coben, D., O'Donoghue, J. and Fitzsimons, G. (eds) (2000) *Perspectives on Adults Learning Mathematics: Research and Practice*. London: KAP.

Coffield, F. (2000) *Differing Visions of a Learning Society*. Bristol: Polity Press.

Harris, M. (1997) *Common Threads – Women, Work and Mathematics*. Stoke: Trentham.

Henderson, A. (1998) *Maths for the Dyslexic, A Practical Guide*. London: Fulton.

Kelly, V. (2004) *The Curriculum* (5th ed) London: Sage.

Miles, T.R. and Miles, E. (eds) (2004) *Dyslexia and Mathematics*. London: Routledge.

Sierpinska, A. (1996) *Understanding in Mathematics*. London: Macmillan.

Swan, M. (2005) *Improving Learning in Mathematics: Challenges and Strategies*. Standards Unit. DfES

Swan, M. (2006) *Collaborative Learning in Mathematics, A Challenge to our Beliefs and Practices*. Leicester: NIACE.

Journals

Research in Post-Compulsory Education

Journal of Vocational Education and Training

Journal for Research in Mathematics Education

Websites

www.ocr.org.uk

www.qca.org.uk

www.dfes.gov.uk

www.lluk.org.uk

www.niace.org.uk National Institute for Adult and Continuing Education (NIACE)

www.ncetm.org.uk/ The National Centre for Excellence in Teaching of Mathematics (NCETM) – excellent resource which includes a professional development portal

www.nrdc.org.uk National Research and Development Centre for research into all areas of adult numeracy (and literacy and ESOL)

<http://www.maths4life.org> (Resource: 'Thinking Through Mathematics, strategies for teaching and learning' DfES 2007.

www.dfes.gov.uk/readwriteplus Adult Numeracy Core Curriculum and related documents

Assessment Criteria, Knowledge and Evidence Linked to Practice

1.

	Assessment Criteria	Knowledge	Evidence Linked to Practice
1.1	Analyse ways in which the curriculum offer might differ according to the educational/ training context.	The range of contexts in which numeracy education and training are offered in the lifelong learning sector.	Written evidence of an observation of a colleague teaching numeracy in a different teaching setting/context and which refers to one or more different approaches to learning that were observed. Written evidence, which may take the form of a short presentation demonstrating knowledge and understanding of the range of contexts in which education and training are offered in the sector and different approaches to numeracy learning and teaching.
1.2	Analyse ways in which delivery of curriculum might vary according to purpose and context, with reference to examples from own practice.	Appropriate approaches to mathematics and numeracy teaching. How to plan to support equality and diversity. The impact of situation and context on the teaching of numeracy.	

2.

	Assessment Criteria	Knowledge	Evidence Linked to Practice
2.1	Analyse theories, models and approaches to curriculum design and their potential influence on outcomes for individual learners and groups.	Understanding of theories, principles and models of numeracy curriculum design and implementation and their impact on teaching and learning.	Written evidence which includes: <ul style="list-style-type: none"> • A discussion of different curriculum models, which takes into account context and constraints and shows how the design and delivery effect outcomes for individual learners • An account of the development of a numeracy teaching programme based around a selected topic together with an analysis of its effectiveness and/or appropriateness for either an individual learner or a group of learners.
2.2	Analyse the appropriateness of a particular curriculum in relation to individual learners/ a cohort of learners.	How to plan to meet learner needs and curriculum requirements. How to address diversity and inclusion issues.	

			The background of the learner/s and context should be included.
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3.

	Assessment Criteria	Knowledge	Evidence Linked to Practice
3.1	Analyse and explain ways in which equality of opportunity and respect for diversity can be built into curriculum design.	Understanding of the significance of equality and diversity for curriculum design, and take opportunities to promote equality within practice. Personal, social, cultural, economic and political factors that may affect the learning, development and progression of people with numeracy needs.	Written evidence of planning a teaching session, carrying out and evaluating this session. The evaluation should demonstrate knowledge and understanding of the significance of equality and diversity in the design of the curriculum. The evidence should illustrate the opportunities/strategies taken to promote equality and the evaluation should refer to how these worked in practice.
3.2	Analyse and explain the impact of social, economic and cultural differences on teaching, learning and achievement in own specialist area.		
3.3	Explain ways to challenge discriminatory behaviours where they occur in the learning environment.		

4.

	Assessment Criteria	Knowledge	Evidence Linked to Practice
4.1	Apply theories, principles and models of inclusive curriculum to the design and implementation of programmes of study.	The application of theories, principles and models to numeracy curriculum development and practice. How to evaluate learning and teaching activities for numeracy.	Written evidence which: <ul style="list-style-type: none"> critically analyses theories and models of inclusive curriculum design and discusses how these might be applied to teaching and learning programmes Justifies proposals to improve the curriculum model and gives examples
4.2	Justify proposals to improve the curriculum offer and evaluate their effectiveness where these have		

	been implemented.		of where these have been implemented evaluating their effectiveness .
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5.

	Assessment Criteria	Knowledge	Evidence Linked to Practice
5.1	Analyse how theories, principles and models of inclusive curriculum design and development are used to inform own practice and the provision in own specialist area.	Understanding of how to evaluate and improve own practice in inclusive curriculum design and development.	Written evidence which: <ul style="list-style-type: none"> • demonstrates how the theories, models and principles of inclusive learning have impacted on practice in respect of numeracy teaching and learning • describes the effectiveness of the chosen approach to inclusive curriculum design • outlines strengths and areas of improvement • includes an action plan with SMART targets for professional development needs
5.2	Evaluate own approaches, strengths and development needs, in relation to inclusive curriculum design and development.	How research into numeracy and mathematics can inform learning and teaching.	
5.3	Plan and take up opportunities to develop and improve own learning and practice in curriculum design and development.	How to access numeracy training and development opportunities.	