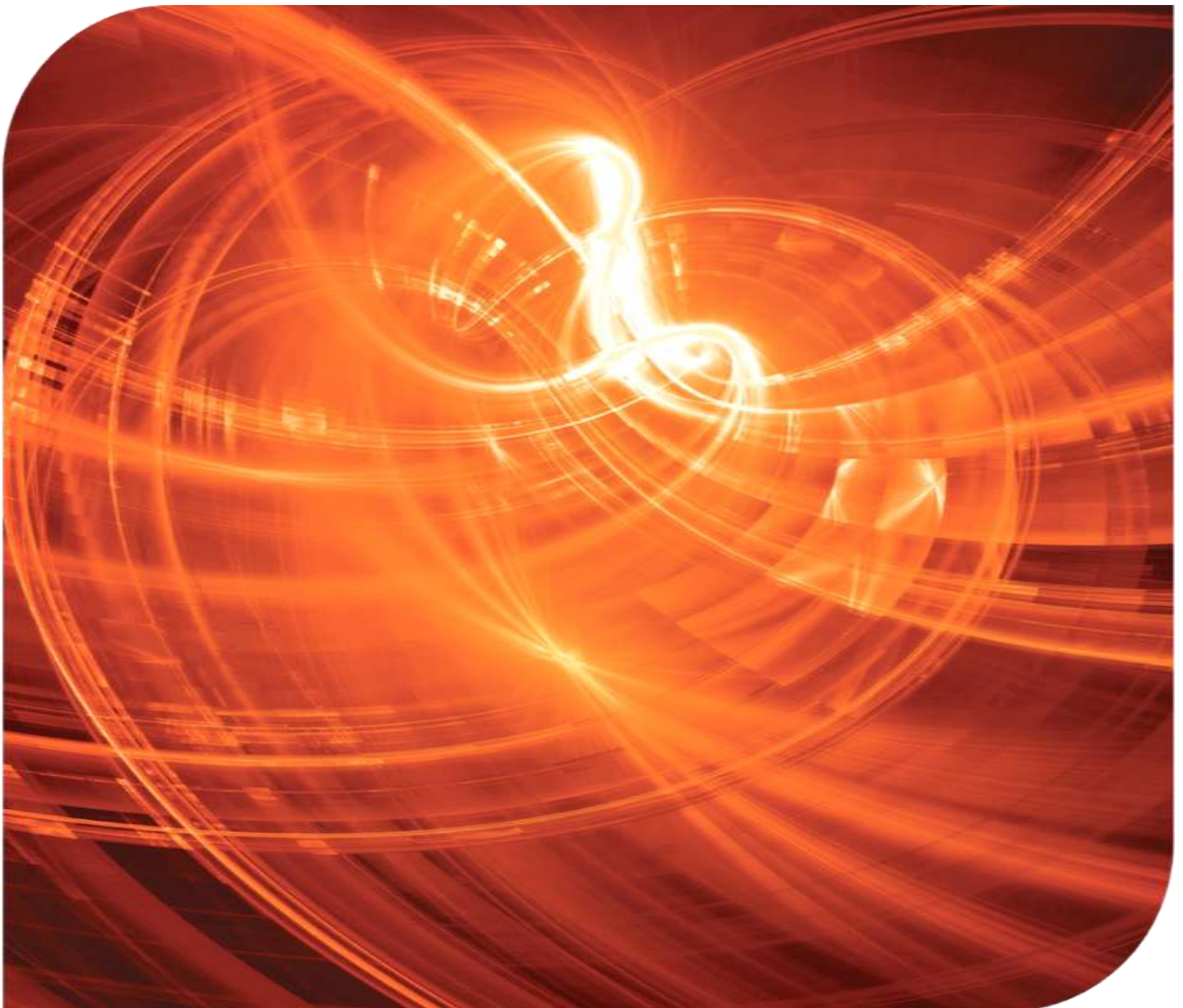


Addressing literacy, language, numeracy and ICT
needs in education and training:
Defining the minimum core of teachers' knowledge,
understanding and personal skills

A guide for initial teacher education programmes

LLUK June 2007, updated 2013



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Note: This document is an LSIS re-brand of the LLUK 2007 document of the same name. It includes minor amendments, updated hyperlinks and some revisions to terminology/language.

Introduction

The minimum core of literacy, language and numeracy for inclusion in post-16 teacher education programmes was first described in 2004 to support awarding organisations and teacher education programmes in equipping all trainee teachers to develop inclusive approaches to addressing the literacy, language and numeracy needs of their learners. Further development of the minimum core, including the introduction of ICT, took place in 2007 informed by key stakeholders, teacher training teams and literacy, language and numeracy subject specialists.

The minimum core of literacy, language, numeracy and ICT strengthens the focus on these areas in all initial teacher training programmes and details a minimum requirement of knowledge, understanding and personal skills in English, Mathematics and ICT for any teacher working in the further education and skills sector. The requirement of the personal skills in English and mathematics is at a level at least equal to that demanded of learners in the national curriculum for schools. The minimum core will ensure sufficient emphasis on how to teach vocational and other areas of specialism in ways that meet the needs of learners whose levels of literacy, language, numeracy and ICT skills would otherwise undermine their chance of success.

The minimum core is a subject specification. It does not detail associated professional practice as this is located within the broader teacher training programmes. Knowledge, understanding and personal skills in English, Mathematics and ICT are detailed as elements. A summary of these elements can be found on page 56. It is not suggested that the elements of the minimum core have equal weighting. The suggested extent of coverage for each element is provided as guidance only. The document gives examples of how this knowledge and understanding will be important for teachers in their professional role.

It is important to note that this is a minimum core. Teacher training programmes are encouraged to include further elements of literacy, language, numeracy and ICT, in addition to those specified, to meet the particular needs of trainee teachers and the learning programmes they teach. Programmes must prepare trainee teachers to teach their own learning programmes in ways that take account of the literacy, language, numeracy and ICT needs of their learners. All teachers need to be confident in working with colleagues to ensure the development of literacy, language, numeracy and ICT skills of learners. Some trainee teachers may wish to complete one or more of the units or qualifications that have been developed to support the integration of literacy, language and numeracy. This could be as part of their initial teacher education course or through continuing professional development.

This publication supports Higher Education Institutions (HEIs) and Awarding Organisations (AOs) in developing their teacher education qualifications and to be of practical use to all those responsible for teacher education and training in colleges and other organisations. Not only will it ensure that all trainee teachers are fully prepared for their teaching role but also support their understanding of further continuing professional development needs and opportunities.

Teachers, teacher trainers and trainee teachers should consult a companion document, *Inclusive learning approaches for literacy, language, numeracy and ICT* which can be found on the [Excellence Gateway](#).

Section 1: Language and literacy

Part A: Knowledge and Understanding

A1 Personal, social and cultural factors influencing language and literacy learning and development

The minimum core provides a foundation upon which all teachers can develop their own skills as well as their ability to identify when it is appropriate to work with subject specialists.

This section details the extent of knowledge, understanding and personal language and literacy skills expected of all teachers in the learning and skills sector.

Trainee teachers developing their language and literacy skills during a teacher education programme will find it helpful to be familiar with the , the [Adult Literacy Core Curriculum](#), the [Adult ESOL Core Curriculum](#) and the [Functional skills standards for English](#). They will also need to be familiar with the [Pre-entry Curriculum Framework](#), [Access for All](#) and [ESOL Access for All](#).

Element

Knowledge and understanding

The different factors affecting the acquisition and development of language and literacy skill.

This requires trainee teachers to be aware of a range of personal, social and cultural factors including: attitudes in the wider society, motivation, age, gender, socio-economic status, ethnicity and disability or learning difficulty.

This requires trainee teachers to be able to reflect on their own and **learners' attitudes, aspirations and attainment, with regard** to personal use and new learning that involves language and literacy.

This requires trainee teachers to be aware of literacy research in this field.

Motivation should include:

- individual and social movement towards integration;
- instrumental (for example, for a specific end such as doing a particular job) and integrative (social impetus, for example, somebody working to obtain British citizenship) factors.

Element

Knowledge and understanding

Age should include:

- difference between perceived and actual difficulties relating to language learning with increasing age;
- awareness of historical and cultural differences in educational curricula and expectations.

Gender should include:

- language and gender stereotyping;
- effect of gender on literacy and language attainment.

Socio-economic factors should include:

- English language and social inequality.

Ethnicity should include:

- the possible effects of previous education in another country or English as a second/ other language upon language and literacy learning and development;
- alternative cultural perspectives on language and literacy.

Disability and learning difficulty should include:

- the possible effects of disability or learning difficulty upon language and literacy learning and development.

This will enable trainee teachers to:

- understand some of the different attitudes and expectations of learners
- understand possible reasons for different rates of learner progress
- review their own practice in light of relevant research in literacy and language.

The importance of English language and literacy in enabling users to participate in public life, society and the modern economy.

This requires trainee teachers to understand the importance of English language and literacy in enabling users to participate in public life and gain access to society and the modern economy.

Participation and access to society should include the impact of:

- limited language skills on a learner and their family;
- limited language skills on access to public services, rights and benefits, civil rights and participation in community life;
- limited language skills on physical and mental well being;
- the requirement to pass citizenship tests.

Element

Knowledge and understanding

Participation and access to the modern economy should include:

- limited language skills, qualifications and obtaining and retaining employment in an increasingly knowledge based economy;
- the increasing language skills demands of technology and the service economy.

This will enable trainee teachers to:

- understand the language skills required in occupations related to their curriculum area and thus better prepare their learners for employment;
- understand how language can support participation in public life and signpost to specialist support as appropriate;
- focus on the importance of developing language skills, in addition to content knowledge, for achieving qualifications;
- understand the value in everyday life of language skills developed in educational settings.

Potential barriers that can hinder development of language skills.

This requires trainee teachers to be aware of personal, cultural, linguistic, institutional, and teaching and learning factors that may inhibit the development of language and literacy skills.

Personal barriers should include:

- previous educational experience;
- limited formal educational experience;
- social circumstances regarding status, housing etc.

Cultural factors should include:

- language as a cultural and social phenomenon and how this affects language and literacy use;
- the links between language and identity.

Institutional factors should include:

- appropriacy of assessment mechanisms;
- access to support that can be used to respond to varying learning needs;
- organisational structures that can hinder or support progress;
- language of promotion and engagement (teacher and institutional).

Element Knowledge and understanding

Factors around teaching and learning should include:

- alternative educational models - previous education in different;
- **cultures may affect learners' ability to adapt to teaching and learning approaches in UK;**
- the need to value informal language acquisition;
- the need to value a range of practical workplace contexts for the acquisition of language.

This will enable trainee teachers to:

- **enquire about learners' backgrounds in a way** that avoids making assumptions, and values their experience whilst recognising potential barriers
- reflect on the appropriacy of the learning experiences provided for learners with little or different formal educational experiences
- be aware of alternative approaches to teaching and learning relating to language acquisition and seek specialist advice as necessary
- value knowledge about communities within their **institution's** catchment area and contribute positively **to their organisation's** efforts at widening participation.

The main learning disabilities and difficulties relating to language learning and skill development.

This requires trainee teachers to be aware of the categories in [Access for All](#) and their implications for language and literacy learning including: strategies to overcome difficulties; resources and specialist equipment; referral procedures to specialist support.

This will enable trainee teachers to:

- understand inclusive practices which trainee teachers can implement in own teaching;
- refer learners to specialists;
- work with specialists in supporting learners.

Element	Knowledge and understanding
Multilingualism and the role of the first language in the acquisition of additional languages.	<p>This requires trainee teachers to be aware of the phenomena of multilingualism and bilingualism and the role of other languages in the acquisition of additional languages.</p> <p>This requires trainee teachers to be aware of the role of the first language in the acquisition of additional languages.</p>
Issues that arise when learning another language or translating from one language to another.	<p>This requires trainee teachers to understand important issues that arise when learning another language.</p> <p>This requires trainee teachers to be able to make comparisons between languages.</p> <p>Awareness of language development should include:</p> <ul style="list-style-type: none">• the difference between language acquisition and language learning;• the value of language and literacy skills in one language in helping develop skills in another. <p>Understanding important issues when learning another language should include:</p> <ul style="list-style-type: none">• the influence of the first language and transference of concepts and grammatical forms between languages;• the concept of inter-language. <p>Comparisons between languages should include features relating to both oral and written communication.</p> <p>This will enable trainee teachers to:</p> <ul style="list-style-type: none">• acknowledge and respect languages other than English;• encourage the use of other languages in the classroom;• reflect on their own approach to error and meaning;• develop approaches which help learners make best use of their first/other languages in learning new language and literacy skills in English.

Element

Knowledge and understanding

This requires trainee teachers to be aware of issues related to varieties of English

This requires trainee teachers to be aware of issues related to varieties of English.

Issues should include:

- the existence and continuing growth of a variety of Englishes, of which standard English is only one;
- attitudes towards standard English and other varieties and dialects;
- the difference between accent and dialect and the effects that these can have on different audiences;
- how factors relating to regional, socio-economic and ethnicity may have different effects upon intended audiences;
- how language variety is used to develop and maintain personal, social and group identity.

This will enable trainee teachers to:

- recognise and value varieties of English in order to accept difference rather than deficit models (that one variety of English is not necessarily inferior to another, just different);
- recognise that **their role is to extend their learners' language expertise**;
- support their learners in using standard oral and written forms as appropriate;
- recognise opportunities to develop multi-lingual perspectives in the classroom.

The importance of context in language use and the influence of the communicative situation.

This requires trainee teachers to be aware of the importance of context in language use and the influence of the communicative situation.

How different contexts can affect the choice of language/literacy used by speakers and writers should include:

- socio-cultural contexts including appropriacy, communicative value and uses of language in context;
- situational contexts including settings, roles, functions and language.

This will enable trainee teachers to:

- reflect on the appropriacy of language use;
- be aware that conventions taken for granted by first language speakers may not be shared by learners with other first languages;
- teach conventions explicitly to learners within the context for learning.

A2

Explicit knowledge about language and of the four skills: speaking, listening, reading and writing.

This section details explicit knowledge about language and the four skills - speaking, listening, reading and writing.

This requires trainee teachers to be aware of language change and the ongoing evolution of the English language.

This requires trainee teachers to be aware of the key features of language and of English in particular.

It is important that trainee teachers recognise that their knowledge and understanding of the four skills should be used holistically with learners to integrate the development of listening, speaking reading and writing.

This explicit knowledge is important in a trainee's teaching and professional role because it will enable them to:

- develop their personal language and literacy knowledge and reflect upon their own experiences;
- identify their own training and development needs;
- maximise opportunities for language and literacy skills development in their programmes;
- begin to recognise the underpinning language and literacy skills required in their courses and decide how to approach their development;
- understand and interpret information from initial and diagnostic language and literacy assessment and make best use of specialist support;
- analyse the language and literacy requirements of own learning programme;
- use this analysis in planning and designing learning, structuring and presenting ideas;
- identify potential barriers to effective communication in programme design and delivery and to take steps to overcome them;
- develop the appropriate meta-language to talk about language and literacy with learners, specialist literacy and language teachers and other colleagues;
- understand that language features can and do change.

SPEAKING

Speaking

Making appropriate choices in oral communication episodes.

Knowledge and understanding

This requires trainee teachers to be aware of the role of speaking in **developing learners' language and literacy skills.**

This requires trainee teachers to be aware of opportunities to **develop learners' speaking skills.**

This requires trainee teachers to understand how spoken discourse is affected by context.

Aspects of speaking should include:

- how choice of linguistic style is dependent upon the roles and relationships of the speaker and audience;
- how levels of formality are affected by factors such as age, role and ethnicity;
- the importance of appropriacy in communication.

This will enable trainee teachers to:

- understand that effective communication is dependent upon a range of factors and contexts;
- reflect upon their own use of speech in different learning and teaching contexts;
- reflect upon their own use of speech in different professional contexts;
- **develop learners' awareness of context and levels of formality by using the context of the vocational environment;**
- reflect upon how cultural differences can influence levels of formality;
- **recognise opportunities to develop learners' speaking skills.**

Speaking

Knowledge and understanding

Having a knowledge of fluency, accuracy and competence for ESOL learners.

This requires trainee teachers to be aware of:

- the concepts of fluency and accuracy and how they relate to one another;
- the concept of communicative competence;
- the main criteria used to assess levels of spoken English and how different criteria are appropriate in different contexts.

This will enable trainee teachers to:

- understand why learners communicate more effectively in certain situations;
- value all aspects of communicative competence;
- value all aspects of the speaking skills gained by learners;
- give appropriate and constructive feedback to learners;
- provide opportunities to develop both accuracy and fluency.

Using spoken English effectively.

This requires trainee teachers to be aware of:

- the key features/conventions of spoken English;
- the ways spoken English differs from written English focusing on:
 - informal language, slang, idioms and fillers;
 - the impact of media change in blurring the boundaries.
 - a range of features used to convey and check meaning in spoken English.

This will enable trainee teachers to:

- understand why some learners appear to speak more easily and effectively than others;
- understand why there can be inconsistencies between what the learner can express in writing and express in speech;
- provide opportunities to practise a range of speaking skills;
- reflect on their own use of spoken language;
- adapt own speaking in class to support dyslexic and ESOL learners;
- recognise the need to refer to a specialist.

LISTENING

Teachers need to be aware of listening skills as much learning and teaching takes place through the medium of spoken English.

Listening

Knowledge and understanding

Listening effectively

This requires trainee teachers to be aware of:

- how oral information is processed;
- the importance of prior knowledge and prediction in the processing of oral information;
- different approaches to listening depending on purpose;
- sub-skills required for effective listening;
- the importance of inference, background knowledge and context for interpretation and full understanding in listening and spoken language;
- the cultural nature of much background knowledge;
- common challenges to the processing of oral information.

This will enable trainee teachers to:

- include activities that develop a range of listening strategies;
- recognise and support learners who are using inappropriate strategies;
- know how much to talk when in any given situation;
- recognise the importance of signposting and contextualisation;
- identify use of particular spoken style;
- provide support for listening activities;
- recognise cultural barriers to listening;
- provide relevant and appropriate activities in order to practise listening skills;
- **build confidence in the learners' own knowledge and** developing skills;
- make the concept of effective listening explicit to learners as appropriate;
- provide pre-teaching activities to supply background information;
- reflect upon their own use of speech in order to support learners in the process of achieving full understanding.

READING

Knowledge and understanding

Reading

Interpreting written texts.

This requires trainee teachers to understand:

- the reading process;
- awareness of the variety of approaches to text depending on the purpose of reading;
- the inter-relationship of approach to text, reading strategies and the purpose of the reading activity;
- **the term ‘full understanding’ in the context of reading;**
- the different ways in which a written message can be interpreted;
- the importance of inference;
- the importance of background knowledge and strategies to **stimulate learners’ prior/existing knowledge to aid** understanding of texts;
- a range of discourse features;
- how discourse features convey meaning, indicate purpose and indicate the intended audience;
- the impact of culturally specific knowledge.

Aspects of the reading process include:

- awareness of models of reading;
- awareness of reading at text, sentence and word level and what this means at the different levels;
- reading strategies should include skimming, scanning, detailed and critical reading;
- awareness of the different mediums for presenting written texts. For example, on-screen, paper-based.

Inference and background knowledge should include:

- knowledge of a range of text types and text layout;
- knowledge of/familiarity with the main topic;
- knowledge of discourse features;
- the importance of topical or local information, cultural knowledge and shared experience in matching textual information and structure with their own knowledge;
- the conventions of structure and cohesion in discursive writing.

Reading

Knowledge and understanding

This will enable trainee teachers to:

- manage their reading time more effectively by applying the appropriate strategy;
- understand the likely adverse effect **on learners'** progression and achievement of not having or using a range of reading strategies;
- support learners by making them aware of different approaches to reading course materials;
- promote activities to support the understanding of texts;
- understand the value of checking existing knowledge including cultural knowledge which is often taken for granted;
- devise appropriate pre-teaching activities;
- understand the level of difficulty in texts they use and identify **potential gaps between learners'** skill levels in reading and level of complexity of vocational texts;
- recognise discourse features in their own and **others' written** texts;
- guide learners to recognise different text types especially when these are unfamiliar.

Knowledge of how textual features support reading.

This requires trainee teachers to be aware of:

- features which identify the purpose of the text or convey or change meaning;
- the role of these features;
- the use of these features in other languages.

The role of vocabulary, grammar and punctuation in texts and how **these affect texts'** accessibility should be considered.

A range of typographical features should be included.

A range of graphological features should be included.

The role of these features should include:

- the role of punctuation to clarify meaning and illustrate the grammatical structure of sentences;
- the role of typographical features to support the structure of a text to make material more accessible;
- the role of graphological features to illustrate the main points of a text and to make material more accessible.

Reading

Knowledge and understanding

This will enable trainee teachers to:

- support their learners in producing texts which make effective use of punctuation, typological and graphological features;
- understand the difficulties that learners from different linguistic backgrounds may have in interpreting and producing texts containing these features.

Understanding the barriers to accessing text.

This requires trainee teachers to be aware of barriers to accessing texts for:

- learners with limited language and/or literacy skills;
- bilingual/multi-lingual learners.

Awareness should include features at text, sentence and word level.

This will enable trainee teachers to:

- design and produce inclusive and differentiated resources and assessment materials;
- where appropriate, access specialist advice and/or resources to support learners with limited language or literacy skills;
- enable learners with limited language/literacy skills or who are from a different linguistic/cultural background to access learning and assessment materials.

WRITING

Writing

Knowledge and understanding

Communicating the writing process.

This requires trainee teachers to be aware of:

- the different stages in the production of written work;
- the importance of this process in ensuring the coherence of completed documents;
- different scripts (for example, right to left, top to bottom);
- alternative cultural perspectives on writing processes (and what makes effective writing).

Aspects should include:

- awareness of the writing process including planning, drafting and editing;
- awareness of pre-writing activities to support the writing process;
- the factors that influence the language and structure of texts including audience, purpose, context and information to be conveyed;
- awareness of alternative cultural perspectives on writing including alternative cultural values in relation to literacy.

This will enable trainee teachers to:

- produce effective written materials for colleagues, the institution in which they work or external bodies;
- produce teaching and learning materials that are well structured and easily understood, including by those from other cultural backgrounds;
- produce materials which are easily accessible for learners with different literacy skills and perceptions - including bilingual and multilingual learners;
- model the writing process for learners and support the production of this written work;
- discuss the writing process with learners.

Using genre to develop writing.

This requires trainee teachers to understand:

- a range of text types and their purpose and use in different contexts;
- the significant features of different text types;
- cross-cultural differences in the features of written texts.

Writing

Knowledge and understanding

This will enable trainee teachers to:

- develop their personal skills of reading and writing;
- construct written texts for different contexts, purposes and audiences;
- provide models of different text types to learners;
- support learners from a range of different cultural backgrounds.

Developing spelling and punctuation skills.

This requires trainee teachers to understand:

- the significant features of English spelling;
- the contribution of punctuation to meaning.

The significant features of English spelling should include:

- historical development;
- sound/symbol relationship;
- common spelling patterns;
- the use of a range of spelling strategies, including rules and exceptions to rules;
- common errors/confusions.

The contribution of punctuation to meaning should include:

- the relation of punctuation to grammar;
- the use of punctuation to define, refine and denote meaning;
- the use of punctuation in the transcription of spoken English;
- the culturally specific nature of much punctuation.

This will enable trainee teachers to:

- help learners to choose appropriate spelling strategies, especially in relation to learning technical vocabulary in area of learning;
- recognise that the spelling difficulties of some bi-literate or multi-literate learners may relate to different spelling systems in their first/other languages;
- produce accurate written material which learners will be able to understand;
- identify punctuation used creatively for specific effect;
- help learners use punctuation to make meaning clear.

Section 1: Language and literacy

Part B: Personal Language Skills

SPEAKING

Speaking

Expressing yourself clearly, using communication techniques to help convey meaning and to enhance the delivery and accessibility of the message.

Personal language skills for teaching and professional life

This requires trainee teachers to be able to:

- express themselves clearly and use a range of communication techniques with a range of people for different purposes.

Communication techniques that help convey meaning and enhance the delivery and accessibility of the message should include:

- structuring material;
- using a logical sequence and making connections;
- using verbal illustrations, analogy and real life examples.

Showing the ability to use language, style and tone in ways that suit the intended audience, and to recognise their use by others.

This requires trainee teachers to be able to:

- use language style and tone appropriate to the audience;
- recognise the use of language, style and tone of others.

Appropriate use of language should include:

- varying the level of formality according to audience and purpose;
- adapting the delivery according to the level, needs and prior knowledge of the audience;
- using pitch, pace, stress and intonation to convey and reinforce meaning;
- explaining specialist terminology or jargon;
- avoiding excessive or unnecessary use of idiomatic English.

Identifying and recognising the language use of others should include:

- identifying appropriate and inappropriate use of language by others;
- recognising the motivation of others' language use;
- evaluating the effectiveness of other speakers' language use.

Using appropriate techniques to reinforce oral communication, check how well the information is received and support the understanding of those listening.

This requires trainee teachers to be able to use appropriate communication techniques to:

- reinforce oral communication;
- check how well the information is received;
- support the understanding of those listening.

Speaking

Personal language skills for teaching and professional life

Trainee teachers should understand when a technique is being used to reinforce, check or support.

Appropriate techniques should include:

- repeating, rephrasing and summarising;
- the provision of written notes or bullet pointed summaries;
- the use of visual aids such as charts, diagrams and flowcharts;
- employing a range of questioning techniques;
- requesting feedback and responding appropriately;
- asking for a summary of information given.

Using non-verbal communication to assist in conveying meaning and receiving information, and recognising its use by others.

This requires trainee teachers to be aware of how communication is affected and assisted by the use of non- verbal features.

Awareness should include:

- the use of a range of non-verbal communication to support, assist and refine;
- the interpretation of the non-verbal signals of others;
- the understanding that non-verbal features may convey different meanings in other cultures.

LISTENING

Listening

Personal language skills for teaching and professional life

Listening attentively and responding sensitively to contributions made by others.

This requires trainee teachers to be able to:

- use the linguistic and cultural conventions that demonstrate active listening and responding during discussions and oral exchanges;
- use a range of listening skills, techniques and responses.

Listening skills, techniques and responses should include:

- listening face-to-face and via technology with individuals and groups;
- listening for different purposes;
- a range of non-verbal, confirmatory and questioning techniques to show active listening and response.

Reading

Reading

Personal language skills for teaching and professional life

Find, and select from, a range of reference material and sources of information, including the Internet.

This requires trainee teachers to be able to access:

- a wide range of information sources;
- relevant sources of information for different audiences.

This requires trainee teachers to be aware of different approaches to conducting general and specific enquiries.

Enquiry approaches should include the use of both paper-based and electronic systems.

Use and reflect on a range of reading strategies to interpret texts and to locate information or meaning.

This requires trainee teachers to be able to use:

- different strategies for locating information within texts and for extracting meaning;
- strategies appropriate to the purpose for reading.

Reading strategies should include:

- skimming, scanning, detailed and critical reading.

Reading should be undertaken for a range of purposes.

Identify and record the key information or messages contained within reading material using note-taking techniques.

This requires trainee teachers to be able to:

- identify key information or messages in a text;
- record this information using note-taking techniques appropriate to both the purpose of and the audience for the notes.

A range of techniques for identifying the key information, themes and concepts within a text should be included. For example, annotation of the text or text marking.

A range of note-taking techniques should be included. For example, linear and diagrammatic styles.

WRITING

Writing

Personal language skills for teaching and professional life

Write fluently, accurately and legibly on a range of topics.

This requires trainee teachers to write fluently, accurately and legibly.

Writing fluently should include:

- implementing the various stages of the writing process;
- structuring the content appropriately.

Writing accurately should include:

- ensuring that spelling, punctuation and use of grammar is accurate.

Writing legibly should include:

- using a printed or cursive style in hand written documents that can be read easily;
- using a font size and style appropriate to the intended audience in word-processed documents.

Select appropriate format and style of writing for different purposes and different readers.

This requires trainee teachers to be able to select appropriate format and style of writing for different purposes and different readers.

Selection should include:

- following the standard conventions for different text types;
- following the standard conventions for texts with different functions
- demonstrating an awareness of the intended audience.

Use spelling and punctuation accurately in order to make meaning clear.

This requires trainee teachers to be able to:

- spell accurately to ensure that correct meaning is conveyed;
- use a range of checking mechanisms and understand their limitations.

Checking mechanisms should include:

- personal proof-reading;
- the use of dictionaries;
- the use of electronic spell-checking devices;
- use the full range of punctuation accurately;
- use punctuation to establish meaning;
- use punctuation according to accepted rules and conventions;
- use punctuation to achieve specific effects.

Writing

Personal language skills for teaching and professional life

Understand and use the conventions of grammar (the forms and structures of words, phrases, clauses, sentences and texts) consistently when producing written text.

This requires trainee teachers to be able to:

- use grammar accurately in order to convey meaning;
- use syntax according to accepted rules and conventions;
- use grammar to achieve specific effects;
- avoid common errors and confusions;
- understand the appropriate meta-language.

Section 2: Numeracy

Part A: Knowledge and Understanding

A1 Personal, social and cultural factors influencing numeracy learning and development

The minimum core provides a foundation upon which all teachers can develop their own skills as well as their ability to identify when it is appropriate to work with subject specialists.

This section identifies the extent of knowledge, understanding and personal numeracy skills expected of all teachers in the learning and skills sector.

Trainee teachers developing their numeracy skills in teacher education programmes will find it helpful to be familiar with the [National Standards for Adult Numeracy](#), the [Adult Numeracy Core Curriculum](#), and the [Functional skills standards for mathematics](#). They will also need to be familiar with the [Pre-entry Curriculum Framework](#) and [Access for All](#).

Element

Knowledge and understanding

The different factors affecting the acquisition and development of numeracy skills.

This requires trainee teachers to be aware of a range of personal, social and cultural factors including: attitudes in the wider society, age, motivation, gender, ethnicity, socio- economic status and disability or learning difficulty.

This requires trainee teachers to be aware of and reflect on their **own and learners' attitudes and attainment relating to personal numeracy use** and to new learning that involves numeracy.

This requires trainee teachers to be aware of numeracy research in this field.

Attitudes in the wider society should include:

- acceptability of low numeracy skills;
- influences of family attitudes and peer group pressure;
- perceptions of numeracy as a difficult or boring subject.

Element

Knowledge and understanding

Age should include:

- numeracy skills varying with age;
- teaching methods and curricula used in schools that have varied over time and the fact that the period during which a learner received their schooling can be important;
- life experience makes a difference to the development of numeracy skills.

Motivation should include:

- individual and social impetus towards making sense of our encounters with numeracy in our everyday lives;
- instrumental (for example, for a specific end such as doing a particular job) and integrative (social impetus, for example, communicating ideas) factors.

Gender should include:

- stereotyping;
- time-related changes in attitudes and achievement.

Socio-economic status should include

- numeracy and social equality.

Ethnicity should include:

- different attitudes, approaches and achievement related to other cultures and countries.
- Disability and learning difficulties should include
- the possible effects of disability or learning difficulty on numeracy development.

This will enable teachers to:

- understand learner attitudes, prior learning and attainment in numeracy learning;
- understand the different rates of learner progress.

The importance of numeracy in enabling users to participate in, and gain access to, society and the modern economy.

This requires trainee teachers to understand the importance of numeracy in enabling users to participate in and gain access to society and the modern economy.

Participation and access to society should include:

- the impact of limited numeracy skills on a learner and their family;
- the relationship between earnings and level of numeracy skill.

Element

Knowledge and understanding

Participation and access to the modern economy should include:

- relationships between numeracy skills and obtaining and retaining employment;
- the increasing numeracy demands of technology and the service economy.

This will enable trainee teachers to:

- understand the numeracy required in occupations and better prepare their learners for employment;
- understand the value in everyday life of numeracy skills developed in educational settings.

Potential barriers that hinder development of numeracy skills.

This requires trainee teachers to be aware of personal, institutional and teaching and learning factors that may inhibit the development of numeracy skills.

Personal barriers should include:

- previous educational experience;
- mismatch between numeracy skill levels and course requirements;
- knowledge of the language used within numeracy assumes a knowledge of a wider vocabulary.

Institutional factors should include:

- lack of assessment mechanisms to aid identification and need;
- access to support that can be used to respond to varying learning needs;
- organisational structures that can hinder or support progress.

Factors around teaching and learning should include:

- impact of the lack of awareness of the numeracy demands of the course;
- failure to take advantage of opportunities to develop numeracy skills;
- **teachers' attitudes and personal confidence;**
- **failure to take account of learners' own methods and techniques,** some of which may have been acquired in other educational systems;
- insufficient value placed on informal numeracy strategies adopted by individuals.

Element

Knowledge and understanding

This will enable trainee teachers to:

- understand how their own attitude and understanding can affect the development of learners;
- understand the need to support varying learning needs;
- **be aware of and act upon the barriers to an learner's development in numeracy.**

The main learning difficulties and disabilities relating to numeracy skills learning and development.

This requires trainee teachers to be aware of the categories in Access for All and their implications for learning numeracy.

This requires trainee teachers to be aware of strategies that learners can use to overcome such difficulties.

This requires trainee teachers to be aware of the resources, specialist equipment, teaching strategies and referral procedures which could help learners overcome their numeracy difficulties.

This will enable trainee teachers to:

- refer learners to specialists;
- work with specialists in supporting learners;
- **understand learners' willingness, or ability, to use the numeracy skills required by their area of specialism.**

The common misconceptions and confusions related to number-associated difficulties.

This requires trainee teachers to be aware of the misconceptions or confusions related to number-associated difficulties.

This requires trainee teachers to be aware of the teaching methodology that supports learners with number-associated difficulties.

Element Knowledge and understanding

Misconceptions or confusions should include:

- difficulty in recognising numbers and appreciating their relative size;
- identifying the numeracy inherent in situations;
- selecting correct methods and algorithms;
- those associated with carrying out standard algorithms;
- understanding or utilising abstract representations such as diagrams or symbolic notation.

Teaching methodology to address misconceptions or confusions should include:

- the use of initial and diagnostic assessment to determine learning needs;
- positive use of misconceptions when they are revealed;
- teaching for understanding;
- multiple representations of the same concept;
- the importance of developing key processes in applying numeracy skills;
- working collaboratively and utilising peer support.

This will enable trainee teachers to:

- identify misconceptions and confusions and utilise them positively in their teaching and the development of learners;
- support learner needs through a range of strategies including collaborative practice and peer support.

A2

Explicit knowledge of numeracy communication and processes

This section details explicit knowledge of the key communication that permeates all aspects of numeracy, the key processes and range of knowledge and skills which underpin these processes.

This is important in a trainee's teaching and professional role because it will enable them to:

- develop their personal numeracy knowledge and reflect upon their own experiences;
- identify their own training and development needs;
- analyse the numeracy requirements of any learning programme;
- develop the appropriate meta-language to talk about numeracy with learners, specialists and other teachers;
- **begin to recognise the 'hidden' numeracy skills required in their courses and decide how to approach their development;**
- understand and interpret information from initial and diagnostic numeracy assessment and make best use of specialist support;
- help bring about the changes needed in the organisation and ensure opportunities for numeracy are developed and improved;
- decide when to seek advice from a specialist.

COMMUNICATION

Communication

Knowledge and understanding

Making and using judgements about understanding.

This requires trainee teachers to be aware of methods and purposes of assessment in numeracy.

Methods of assessment should include:

- personal and peer review;
- formal and informal assessments;
- initial, diagnostic, formative and summative assessment.

Purpose of assessment should include:

- identifying knowledge and understanding;
- identifying learning preferences;
- establishing previous learning and experiences;
- informing practice.

This will enable trainee teachers to:

- assess their own knowledge and understanding and identify their own development needs;
- **understand learners' willingness or ability to use the numeracy skills required by their area of specialism;**
- begin to address the needs of learners with learning difficulties and disabilities and seek expert advice for specific learning needs;
- understand and interpret information from initial and diagnostic numeracy assessment and amend their teaching plans to meet the individual needs of learners;
- • make best use of specialist support.

Communicating processes, and understandings.

This requires trainee teachers to be aware of the role of communication in numeracy.

This requires trainee teachers to be aware of effective ways to communicate.

Aspects of communication should include:

- personal communication skills with learners and colleagues;
- forms of numeracy communication and their appropriate selection;
- accurate use of the language of numeracy;
- learning environments which support opportunities for communication.

This will enable trainee teachers to:

- reflect upon and develop their own communication skills;
- consider a range of communication strategies;
- encourage and develop effective communication in others.

PROCESSES

Processes

A knowledge of the capacity of numeracy skills to support problem solving.

Knowledge and understanding

This requires trainee teachers to be aware of:

- the capacity of numeracy skills to help solve routine and non-routine problems in a range of contexts;
- the importance of being able to select and apply a range of numeracy content knowledge and skills to find solutions.

Routine and non-routine problems in a range of contexts should include:

- word problems;
- problems arising from practical situations;
- familiar and unfamiliar contexts within the area of specialism;
- multi-step problems.

Selecting numeracy content knowledge and skills should include:

- situations in which the skills needed can be seen immediately;
- situations in which it may be necessary to try several ideas before the skills needed are revealed.

This will enable trainee teachers to:

- develop confidence in selecting the numeracy skills required in a particular situation;
- tackle a range of unfamiliar problems in different contexts within their professional setting and within their area of specialism.

Making sense of situations and representing them.

This requires trainee teachers to be aware of:

- situations that can be analysed and explored through numeracy;
- the role of models in representing situations;
- methods, operations and tools, including ICT, that can be used in a situation;
- the importance of selecting the numerical information and skills to use.

This will enable trainee teachers to:

- reflect on how they engage in making sense of situations which can be explored through numeracy;
- **develop learners' awareness of the range of contexts where they can benefit from the use of numeracy.**

Processes

Knowledge and understanding

This requires trainee teachers to be aware of:

- the importance of using appropriate procedures (for example, what operations to apply or when it might be appropriate to use a calculator or spreadsheet);
- the role of identifying and examining patterns in making sense of relationships;
- the role of changing values and assumptions in investigating a situation.

This will enable trainee teachers to:

- be aware of how they study situations and analyse them;
- support learners in applying appropriate numeracy skills in a range of contexts.

Using numeracy skills
and content
knowledge.

This requires trainee teachers to be aware of the numeracy content and skills required to support their professional needs.

This requires trainee teachers to be aware of the numeracy content and skills specific to their area of specialism.

Aspects of content and skills knowledge should be those which enable trainee teachers to perform their professional role could include:

- positive and negative numbers of any size;
- calculations with numbers of any size;
- use and calculate ratio and proportion;
- fractions;
- decimals to a given number of decimal places;
- percentages;
- equivalences between fractions, decimals and percentages;
- working with unknown values;
- properties of common 2D and 3D objects;
- 2D representations of 3D objects;
- area, perimeter, volume and capacity;
- scale and rates of change;
- money, metric and, where appropriate, imperial units;
- conversion tables and scales;
- discrete and continuous data;
- frequency diagrams, pie charts and scatter diagrams;
- the probability scale from 0 to 1;
- likelihood or probability;

- other content knowledge specific to the area of study.

Processes

Knowledge and understanding

This will enable trainee teachers to:

- **support learners' numeracy skill development** and adopt a positive and supportive approach to incorporating numeracy in the curriculum and encourage the take up of numeracy support;
- begin to address the needs of learners with learning difficulties and disabilities;
- understand and interpret information from initial and diagnostic numeracy assessment and make best use of specialist support.

Interpreting and evaluating results.

This requires trainee teachers to be aware of:

- the role of interpreting results and drawing conclusions in the light of the original situation;
- the impact of assumptions made and the appropriateness and accuracy of results and conclusions;
- the appropriateness and accuracy of the results and conclusions.

This will enable trainee teachers to:

- consider what the outcomes of an investigation tell them about the original situation and evaluate the reliability and validity of their findings;
- support learners in seeing how numeracy can help to make sense of a situation.

Communicating and reflecting on findings.

This requires trainee teachers to be aware of:

- the importance of choosing appropriate language and forms of presentation to communicate results;
- the need to reflect on any process to consider whether other approaches would have been more effective.

This will enable trainee teachers to:

- identify their own needs when applying numeracy to a range of contexts
- consider more effective ways to tackle situations and learn from their successes and failures.

Section 2: Numeracy

Part B: Personal Numeracy Skills

COMMUNICATION

Communication

Personal numeracy skills for teaching and professional life

Communicate with others about numeracy in a open and supportive manner.

This requires trainee teachers to communicate about numeracy in a manner that supports open discussion.

Using discussion about numeracy should include:

- communicating numeracy concepts, skills and information with individuals and groups;
- **developing own and others' understanding of numeracy concepts and skills;**
- promoting enquiry and sharing of numeracy ideas;
- promoting reflection as a community.

Assess own and other people's understanding.

This requires trainee teachers to be able to assess their own, and **others' understanding.**

Assessment techniques should include:

- personal review and reflection;
- peer assessment;
- questioning for understanding;
- recognising and analysing misconceptions;
- formal assessment methods such as written tests and observations.

Express yourself clearly and accurately.

This requires trainee teachers to be able to:

- communicate number concepts clearly and effectively;
- use the language of numeracy accurately.

Appropriate communication should include:

- using logical sequences and making connections;
- structuring material;
- use of debate around justification and/or argument;
- using illustrations, analogy and examples that consider real life contexts;
- accurate use of taxonomy such as equality signs;
- correct use of language such as for 2D and 3D shapes;
- appropriateness concerning accuracy and estimation.

Communication

Personal numeracy skills for teaching and professional life

Communicate about numeracy in a variety of ways that suit and support the intended audience, and recognise such use by others.

This requires trainee teachers to be able to:

- recognise differences in language needs;
- formulate and provide appropriate responses;
- recognise appropriate use of communication about numeracy by others.

Appropriate approaches should include:

- checking how the information is received and explaining terms or modifying language appropriately;
- adapting delivery according to level, needs and prior knowledge of the audience;
- using pitch, pace, stress and intonation to reinforce meaning;
- using non-verbal cues;
- interpreting non-verbal cues of others;
- listening to the audience to identify the range of their numeracy related vocabulary;
- identifying errors in terminology and correcting them.

Use appropriate techniques to reinforce oral communication, check how well the information is received and support the understanding of those listening.

This requires trainee teachers to be able to use language and other forms of representation to:

- reinforce oral communication of numeracy concepts and skills
- check how well the information is received
- support the understanding of those listening.

Appropriate techniques should include:

- provision of notes, summaries and examples;
- repeating, rephrasing and summarising;
- employing a range of questioning techniques;
- requesting feedback and responding appropriately
- asking for a summary of information given;
- the use of visual aids including still and moving images and animations, equipment and artefacts;
- the use of information and communications technology.

PROCESSES

Processes

Use strategies to make sense of a situation requiring the application of numeracy.

Personal numeracy skills for teaching and professional life

This requires trainee teachers to be able to identify familiar and unfamiliar contexts within the scope of their professional role that can be analysed and explored through numeracy.

This requires trainee teachers to be able to explore and represent situations in a range of forms.

Range of forms should include:

- diagrams, charts and graphs;
- tables;
- models.

This requires trainee teachers to be able to employ appropriate methods, operations and tools, including ICT to explore a situation.

Appropriate methods should include:

- making connections between the current situation and those they have met previously;
- employing systematic methods;
- breaking the problem down.

Process and analyse data.

This requires trainee teachers to be able to use appropriate reasoning, strategies and techniques when tackling problems.

Appropriate reasoning should include:

- using knowledge of related problems;
- planning ahead;
- looking for and examining patterns;
- making and beginning to justify conjectures;
- exploring effects of varying values;
- working logically;
- taking account of constraints and assumptions;
- reasoning inductively and deductively;
- using feedback.

Appropriate strategies should include:

- using diagrams, charts and graphs;
- calculating accurately, using a calculator where appropriate;
- using notation accurately;
- recording methods, results and conclusions;
- estimating, approximating and checking working.

Processes

Personal numeracy skills for teaching and professional life

Use generic content knowledge and skills.

This requires trainee teachers to be able to apply appropriate knowledge and skills to problem solving processes.

Appropriate knowledge and skills should be relevant to trainee teachers in their role and could include:

- understanding positive and negative numbers of any size;
- carrying out calculations with numbers of any size;
- understanding and using equivalences between fractions, decimals and percentages;
- calculating with fractions;
- calculating with decimals to a given number of decimal places;
- using and calculating with ratio and proportion;
- working with unknown values and variables;
- having a knowledge of and using the properties of common 2D and 3D shapes;
- creating and interpreting 2D representations of 3D objects;
- working with area, perimeter, volume and capacity of shapes;
- interpreting and using rates of change;
- working with money, metric and, where appropriate, imperial units;
- using conversion tables and scales;
- manipulating discrete and continuous data;
- understanding and creating frequency diagrams, pie charts and scatter diagrams;
- understanding likelihood or probability;
- using the probability scale from 0 to 1.

A range of note-taking techniques should be included. For example, linear and diagrammatic styles.

Make decisions concerning content knowledge and skills.

This requires trainee teachers to be able to assess their own level of understanding of the areas of numeracy required.

This requires trainee teachers to be able to identify means of addressing their own learning needs.

Appropriate approaches to dealing with gaps in personal knowledge should include:

- calling upon subject experts for support;
- using professional development opportunities;
- using reference material including books and the Internet.

Processes

Personal numeracy skills for teaching and professional life

Understand the validity of different methods.

This requires trainee teachers to be able to assess the validity of different methods when applied to particular situations.

Different methods should include:

- the use of calculators;
- formal and informal methods of calculation;
- graphical methods;
- the use of ICT tools, such as spreadsheets.

Consider accuracy, efficiency and effectiveness when solving problems and reflect on what has been learnt.

This requires trainee teachers to be able to:

- consider whether alternative strategies may have helped or been better;
- identify more efficient methods when they are presented;
- consider the impact of assumptions made and the appropriateness and accuracy of results and conclusions;
- assess the strength of empirical evidence;
- understand the difference between evidence and proof.

This requires trainee teachers to be able to make connections between the situation currently being studied and ones they have met before.

Make sense of data.

This requires trainee teachers to be able to:

- put forward convincing arguments based on findings and make general statements;
- relate findings to the original context.

Select appropriate format and style for communicating findings.

This requires trainee teachers to be able to:

- communicate findings in a range of forms;
- talk about their findings.

Section 3: Information and Communication Technology (ICT)

Part A: Knowledge and Understanding

A1

Personal, social and cultural factors influencing ICT learning and development

This section details the extent of knowledge, understanding and personal ICT skills expected of all teachers in the learning and skills sector.

The minimum core will provide a foundation upon which all teachers can develop their own skills as well as their ability to identify when it is appropriate to work with subject specialists.

Trainee teachers developing their ICT skills in teacher education programmes will find it helpful to be familiar with the [National Standards for Adult ICT skills](#), the [ICT Skills for Life Curriculum](#), the [Functional skills standards for ICT](#). They will also need to be familiar with [Introducing Access for All](#).

Element

Knowledge and understanding

The different factors affecting the acquisition and development of ICT skills.

This requires trainee teachers to be aware of a range of personal and social factors including: attitudes in the wider society, age, motivation, gender, socio-economic status, ethnicity and disability or learning difficulty.

This requires trainee teachers to be able to reflect on their own and **learners' attitudes and attainment, with regard to personal** use and new learning that involves ICT.

This requires trainee teachers to be aware of ICT research in this field.

Attitudes in the wider society should include:

- the role of ICT in society;
- social attitudes to file sharing and illegal copying or downloading;
- fear of viruses, spam, phishing, etc.;
- availability of and access to unsuitable/illegal/pornographic materials.

Element

Knowledge and understanding

Age should include:

- perceived difficulties relating to ICT learning with increasing age;
- time factors related to the introduction of ICT teaching and learning into the school curriculum.

Motivational backgrounds should include:

- motivational factors for ICT learning, for example, maintaining contact with family and friends, promotion and progression at work;
- ICT as a vehicle for literacy, numeracy or language development.

Gender should include:

- life experience making a difference to the development of ICT skills;
- gender stereotyping and equality of access and expectation.

Socio-economic factors should include:

- the digital divide, for example, links between poverty and access to ICT;
- access to technological advances, for example, rural communities and broadband availability;
- increasing technological advances and associated costs to invest in and replace hardware and software, for example, operating systems, wireless networks.

Ethnicity should include:

- the possible lack of access to ICT education in another country;
- access to ICT terminology and language for speakers of other languages.

Disability and learning difficulty should include:

- the possible effects of disability or learning difficulty upon access to ICT and upon learning and development;
- different cultural viewpoints on disability.

This will enable trainee teachers to:

- understand learner attitudes and attainment in ICT learning;
- understand the different rates of learner progress.

Element

Knowledge and understanding

The importance of ICT in enabling users to participate in public life, society and the modern economy.

This requires trainee teachers to understand the importance of ICT in enabling users to participate in and gain access to society and the modern economy.

Participation and access to society should include:

- the impact of limited ICT skills and access on a learner and their family;
- the impact of limited ICT skills on access to public services, rights and benefits, civil rights and community life.

Participation and access to the modern economy should include:

- the impact of limited ICT skills and qualifications on obtaining and retaining employment;
- the increasing ICT skills demands of work processes and the service economy.

This will enable trainee teachers to:

- understand the ICT skills required in occupations related to their curriculum area and thus better prepare their learners for employment;
- understand how ICT skills can support participation in public life, social and economic activity;
- acknowledge the value in everyday life of ICT skills developed in educational settings.

The range of learners' technological and educational backgrounds.

This requires trainee teachers to understand the range of learners' technological and educational backgrounds.

Awareness of technological backgrounds should include:

- opportunity for continuity of learning outside the classroom, that is access to ICT equipment at home, and appropriate ICT facilities within the local community;
- learner experience of ICT across the range, that is other than computers.

Awareness of educational backgrounds should include:

- the impact of formal, informal or little/no schooling/training on ICT skills development;
- the spiky ICT skills profiles of learners. For example, competent at word processing but not databases, able to use a digital camera but not a mobile phone;

- identification of the literacy demands of course materials.
- Element Knowledge and understanding

This will enable trainee teachers to:

- **enquire about learners' backgrounds in a way** that avoids making assumptions and values their aspirations and experiences;
- reflect on the appropriateness of the learning experiences provided for learners with little or different formal ICT training or experience.

The main learning disabilities and difficulties relating to ICT learning and skill development.

This requires trainee teachers to be aware of the impact that learning difficulties and disabilities, as described in [Introducing Access for All](#), can have on ICT learning.

This requires trainee teachers to be supportive of strategies that learners can use to overcome difficulties in their ICT use and learning.

This requires trainee teachers to be aware of the resources, specialist equipment, teaching strategies and referral procedures which can help learners overcome their difficulties in ICT use and learning.

Awareness of the impact of learning difficulties and disabilities should include:

- an understanding of how both observable and hidden impairments can affect learning;
- broad familiarity with relevant legislation such as DDA and SENDA and keeping up to date with changes in legislation and terminology;
- an understanding of disclosure and data protection issues.

Understanding the strategies learners can use to overcome difficulties should include:

- asking learners themselves about strategies they already find effective;
- having an overview of some strategies outlined in [Introducing Access for All](#);
- creating a supportive and positive learning environment;
- observing and listening to the learner;
- encouraging learners to ask for support.

Element

Knowledge and understanding

Awareness of the resources, specialist equipment, teaching strategies and referral procedures should include:

- ways of customising a computer for an individual learner's **needs**, using standard packages and/or system facilities;
- **ways of customising a browser for an individual learner's needs**;
- overview of specialist equipment and assistive technologies;
- overview of teaching strategies outlined in [Introducing Access for All](#);
- referral procedures that can be used to get specialist support, such as for communication needs (for example, BSL interpreters), and technical support (for example, for the set up and use of assistive technologies).

This will enable trainee teachers to:

- make reasonable adjustments within their own teaching;
- know when to refer learners to specialists;
- work with specialists in supporting learners.

Potential barriers that inhibit ICT skills development.

This requires trainee teachers to be aware of personal, institutional and teaching and learning factors that may inhibit the development of ICT skills.

Personal barriers should include:

- previous educational experience;
- the jargon used in ICT;
- technology phobia.

Institutional factors should include:

- lack of understanding of the different methodologies for ICT learning and development. For example, focus on workshop-driven delivery;
- **lack of appropriate support for learners' identified needs**;
- ineffective initial assessment instruments or failure to disseminate results;
- lack of availability of ICT equipment within provider institution.

Teaching and learning factors should include:

- impact of a lack of awareness of the ICT demands of the course;
- failure to take advantage of opportunities to develop ICT skills within the course;
- misunderstanding the difference between use of ICT as a purposeful tool and use of ICT to support literacy, language and numeracy learning;
- **teachers' attitudes and personal confidence;**
- inappropriate use of e-learning;
- **lack of recognition in planning learning of learners' spiky profiles and opportunities for informal learning.**

This will enable trainee teachers to:

- **enquire about learners' backgrounds in a way that avoids making assumptions, and values their experience whilst recognising potential barriers;**
- understand how their own attitude, skills, ways of dealing with errors and expectations can affect the engagement and development of learners;
- identify misconceptions and confusions and use them constructively in their teaching;
- reflect on the appropriateness of the learning experiences provided for learners in their ICT skills development;
- be aware of the effective use of ICT as a teaching tool and as a tool which can be used purposefully by learners.

A2

Explicit knowledge about ICT

This section details explicit knowledge about ICT. This is important in a **trainee's teaching and professional role because it will enable** them to:

- develop their personal ICT skills and knowledge and reflect upon their own experiences;
- appreciate the need for safety and security practices;
- analyse the ICT requirements of any learning programme;
- use this analysis in planning courses and designing learning activities;
- identify potential barriers caused by lack of ICT skills or of the ability to apply them effectively;
- develop the appropriate meta-language to talk about ICT with learners, specialists and other teachers;
- recognise the opportunities for informal learning of ICT skills in their courses and decide how to approach their development;
- understand and interpret information from initial and diagnostic assessment of ICT skills and make best use of specialist support;
- help bring about the changes needed in the organisation and ensure opportunities for ICT are developed and improved;
- decide when to seek advice from a specialist.

COMMUNICATION

Communication

Making and using decisions about understanding.

Knowledge and understanding

This requires trainee teachers to be aware of methods and purposes of assessment in ICT.

Methods of assessment should include:

- personal and peer review;
- formal and informal assessments;
- initial, diagnostic, formative and summative assessment.

Purpose or assessment should include:

- identifying knowledge and understanding;
- identifying learning preferences;
- establishing previous learning and experiences;
- informing practice.

This will enable trainee teachers to:

- assess their own knowledge and understanding and identify their own development needs;
- recognise that learners start from different points and have different needs;
- understand and interpret information from initial and diagnostic assessment of ICT skills;
- understand that learners start with and develop spiky profiles of ICT skills and that the requirements of differing contexts and activities also demand spiky profiles of ICT skills;
- use assessment for learning to support learner progression;
- appreciate that there are many and varied means of assessing ICT skills which have differing benefits and limitations;
- begin to address the needs of learners with learning difficulties and disabilities and seek expert advice for specific learning needs
- make best use of specialist support.

Communicating processes and understandings.

This requires trainee teachers to be aware of the role of communication in ICT.

This requires trainee teachers to be aware of effective ways to communicate.

Aspects of communication should include:

- personal communication skills with learners and colleagues;
- forms of ICT communication and their appropriate selection;
- appropriacy of ICT for task, purpose and audience;
- accurate use of the language of ICT;
- learning environments which support opportunities for communication.

This will enable trainee teachers to:

- reflect upon and develop their own communication skills;
- use a range of communication strategies suited to **learners'** needs;
- encourage and develop effective communication in others.

PROCESSES

Processes

Knowledge and understanding

Purposeful use of ICT.

This requires trainee teachers to understand what is meant by purposeful use of ICT:

- uses and benefits to learners;
- building on interests and achievements;
- resources required, including skills, knowledge and the confidence to explore;
- developing the capability for independent and effective action.

This will enable trainee teachers to:

- reflect on their own uses of ICT in teaching and other contexts;
- understand and develop the motivation of learners;
- consider more effective ways to approach situations and learn from their successes and failures;
- develop their own confidence in selecting and using the ICT skills required in various situations;
- become aware of how they study situations and analyse how they can use ICT to good effect, and help learners develop these skills;
- **develop learners' awareness of where and how they** can benefit from the use of ICT;
- support learners in applying ICT appropriately in a range of contexts;
- promote independent ICT capability in learners.

Essential characteristics of ICT.

This requires trainee teachers to understand the essential characteristics of ICT:

- sources, qualities and uses of information;
- methods and purposes of communication;
- features and operation of technology.

Consideration of information should include use and judgement of:

- traditional and ICT-based sources, informal and authoritative sources, partisan and impartial sources
- qualities such as permanence, immediacy, currency, precision, accuracy, reliability, generality, specificity, context, relevance;
- uses such as finding out, selecting, evaluating, comparing, assembling, organising, structuring, analysing, synthesising, deducing, concluding, sharing, presenting.

Consideration of methods and purpose of communication should include:

- intention, audience, effectiveness, impact, formal/informal, one way and two way, definitive or provisional with feedback and review, authoritative or exploratory;
- means of communication such as conversation, discussion, emails, short messages (txts), screen and paper presentations, notes, formal reports.

Consideration of technology should include:

- types of process related to forms of information, match of application tools to purposes, effective use of system features, efficient operation of software and hardware, appropriate safety and security practices;
- discriminating judgement in when and how to make best use of technology to meet purpose, including, as appropriate to trainee **teacher's professional role**:
 - computers and computer-related hardware and software;
 - digital cameras, camcorders and other image capturing equipment;
 - interactive whiteboards;
 - digital television, video, audio and other related multi-media equipment;
 - mobile phones and associated technology to support learning;
 - learning platforms;
 - graphic calculators.

This will enable trainee teachers to:

- **develop learners' understanding of the range of sources of information, its qualities and its uses;**
- **develop learners' appreciation of the various purposes of communication, and means of communicating matched to purpose;**
- **develop learners' knowledge of the potential of technology to meet their needs and their discrimination in judging when and how to use it to good effect;**
- help learners to understand the significance and potential of ICT for themselves and its impact in the wider community;

Section 3: Information and Communication Technology (ICT)

Part A: Knowledge and Understanding

- encourage learners to exploit the opportunities

of ICT to enhance their learning, performance and effectiveness in vocational, academic and other areas of development.

Processes

Knowledge and understanding

How learners develop ICT skills.

This requires trainee teachers to be aware of the ways learners develop ICT skills:

- the uses and benefits of interactive environments;
- stand-alone and embedded approaches;
- exploration and discovery of principles;
- dialogue and collaboration;
- provisionality, review and refinement;
- repetition and reinforcement of concepts.

This will enable trainee teachers to:

- reflect on their own learning and development of ICT skills;
- match their own teaching approaches to the variety of ways in which learners develop ICT experiences and skills;
- encourage exploration, collaboration and peer review as a means of reinforcing learning;
- emphasise to learners the provisional nature of most ICT activity and the opportunities for review, drawing on feedback, development and refinement;
- understand the need for flexibility and openness in meeting the needs of learners.

Section 3: Information and Communication Technology (ICT)

Part B: Personal ICT Skills

COMMUNICATION

Communication

Personal ICT skills for teaching and professional life

Communicate with others with/about ICT in an open and supportive manner.

This requires trainee teachers to communicate with/about ICT in a manner that supports open discussion.

Using discussion with/about ICT should include:

- communicating ICT concepts, skills and information with individuals and groups;
- **developing own and others' understanding of ICT concepts and skills;**
- promoting enquiry and sharing of ICT ideas;
- promoting reflection as a community.

Assess own, and other people's, understanding.

This requires trainee teachers to be able to assess their own, and **others' understanding.**

Assessment techniques should include:

- personal review and reflection;
- peer assessment;
- questioning for understanding;
- recognising and analysing misconceptions;
- formal assessment methods such as written tests and observations.

Express yourself clearly and accurately.

This requires trainee teachers to be able to:

- communicate ICT concepts clearly and effectively;
- use the language of ICT accurately.

Appropriate communication should include:

- structuring material;
- use of debate around justification and fitness for purpose;
- using illustrations, analogy and examples in purposeful contexts;
- correct use of language such as for ICT software functionality and systems;
- appropriateness for audience and purpose.

Communication

Personal ICT skills for teaching and professional life

Communicate about/with ICT in a variety of ways that suit and support the intended audience, and recognise such use by others.

This requires trainee teachers to be able to:

- recognise differences in language needs;
- formulate and provide appropriate responses;
- recognise appropriate use of communication about/with ICT by others.

Appropriate approaches should include:

- checking how the information is received and explain terms or modify language appropriately;
- adapting delivery according to level, needs and prior knowledge of the audience;
- using pitch, pace, stress and intonation to reinforce meaning;
- using non-verbal cues;
- interpreting non-verbal cues of others;
- listening to the audience to identify the range of their ICT related vocabulary;
- identifying errors in terminology and correcting them.

Use appropriate techniques to reinforce oral communication, check how well the information is received and support the understanding of those listening.

This requires trainee teachers to be able to use language and other forms of representation to:

- reinforce oral communication of ICT concepts and skills;
- check how well the information is received;
- support the understanding of those listening.

Trainee teachers should understand when a technique is being used to reinforce, check or support.

Appropriate techniques should include:

- provision of notes, summaries and examples
- modelling and demonstration;
- repeating, rephrasing and summarising;
- employing a range of questioning techniques;
- requesting feedback and responding appropriately;
- asking for a summary of information given;
- the use of visual aids including still and moving images and animations, equipment and artefacts.

PROCESSES

Processes

Personal ICT skills for teaching and professional life

Using ICT systems.

This requires trainee teachers to:

- select, interact with and use ICT systems independently to meet a variety of needs in their teaching and professional life;
- evaluate the effectiveness of the ICT systems they have used;
- manage information storage to enable efficient retrieval;
- follow and understand the need for safety and security practices, particularly in relation to risks to children;
- manage basic troubleshooting and know when to ask for support.

Selection, interaction and use of ICT systems should be relevant to trainee teachers in their role and could include:

- computers and computer-related hardware and software;
- digital cameras, camcorders and other image capturing equipment;
- interactive whiteboards;
- digital television, video, audio and other related multi-media equipment;
- mobile phones and associated technology to support learning;
- learning platforms;
- graphic calculators.

Using ICT systems should include the knowledge and skill to:

- use correct procedures to start and shut down an ICT system;
- use a communication service to access the Internet;
- select and use software applications to meet needs and solve problems;
- select and use interface features and system facilities effectively to meet needs;
- adjust system settings as appropriate to learner needs;
- review the effectiveness of ICT tools to meet needs in order to inform future judgements;
- manage files and folder structures to enable efficient information retrieval;
- insert, remove, label and store media safely;
- minimise physical stress when using ICT;
- keep information secure;
- understand the danger of computer viruses, and how to minimise risk;
- understand the need to stay safe and to respect others when using ICT-based communication;
- identify ICT problems and take appropriate action.

Processes

Personal ICT skills for teaching and professional life

Finding, selecting and exchanging information.

This requires trainee teachers to:

- select and use a variety of sources of information independently to meet a variety of needs in their teaching and professional life;
- access, search for, select and use ICT-based information and evaluate its fitness for purpose;
- select and use ICT to communicate and exchange information for a variety of professional and personal purposes safely, responsibly and effectively;
- evaluate their use of ICT-based communication and exchange of information.

Finding, selecting and exchanging information should include the knowledge and skill to:

- select and use appropriate sources of ICT-based and other forms of information which match requirements;
- recognise copyright and other constraints on the use of information;
- access, navigate and search internet sources of information purposefully and effectively;
- use appropriate search techniques to locate information and design queries to select relevant information;
- use discrimination in selecting information that matches requirements from a variety of sources, and evaluate its fitness for purpose;
- recognise characteristics of information, including intention and authority of provider, currency of the information, reliability, accuracy, relevance, potential bias, confidentiality, ownership, applicability to general or specific contexts;
- create, access, read and respond appropriately to e-mail and other ICT-based communication and adapt style and content to suit audience;
- manage efficient storage of ICT-based communications, attachments and contact details.

Processes

Personal ICT skills for teaching and professional life

Developing and presenting information.

This requires trainee teachers to:

- enter, develop and format information independently to suit its meaning and purpose and to meet a variety of needs in their teaching and professional life, including text and tables, images, numbers and records;
- bring together information to suit audience, content and purpose;
- present information in ways that are fit for purpose and audience;
- evaluate the selection and use of ICT tools and facilities used to present information.

Developing and presenting information should include the knowledge and skill to:

- enter, organise, develop, refine and format information, applying editing techniques to meet needs;
- use appropriate page layout;
- enter and format text to maximise clarity and enhance presentation;
- create and format tables to maximise clarity of the structure and content of information and to enhance presentation;
- obtain, insert, size, crop and position images that are fit for purpose;
- enter, develop and organise numerical information in ways that are fit for purpose, including the use of formulas and functions;
- format numerical information appropriately;
- create and develop charts and graphs to suit the numerical information, using suitable labels;
- enter, organise, select and edit records using field names and headings, data types and unique record identifiers where appropriate;
- sort records on one or more fields in ascending or descending order;
- bring together and organise components of images and text;
- organise information of different forms or from different sources to achieve a purpose;
- work accurately and proof read, using software facilities where appropriate;
- produce information that is fit for purpose and audience using accepted layouts and conventions as appropriate;
- evaluate the effectiveness of ICT tools to meet presentation needs;
- review and modify work as it progresses to ensure the result is fit for purpose and audience, and to inform future judgements.

Summary of minimum core elements

Language and Literacy

Personal, social and cultural factors influencing language and literacy learning and development

- The different factors affecting the acquisition and development of language and literacy skills.
- The importance of English language and literacy in enabling users to participate in public life, society and the modern economy.
- Potential barriers that can hinder development of language skills.
- The main learning disabilities and difficulties relating to language learning and skill development.
- Multilingualism and the role of the first language in the acquisition of additional languages.
- Issues that arise when learning another language or translating from one language to another.
- Issues related to varieties of English, including standard English, dialects and attitudes towards them.
- The importance of context in language use and the influence of the communicative situation.

Explicit knowledge about language and of the four skills: speaking, listening, reading and writing

Speaking

- Making appropriate choices in oral communication episodes.
- Having a knowledge of fluency, accuracy and competence for ESOL learners.
- Using spoken English effectively.

Listening

- Listening effectively.

Reading

- Interpreting written texts.
- Knowledge of how textual features support reading.
- Understanding the barriers to accessing text.

Writing

- Communicating the writing process.
- Using genre to develop writing.
- Developing spelling and punctuation skills.

Personal Language Skills

Speaking

- Expressing yourself clearly, using communication techniques to help convey meaning and to enhance the delivery and accessibility of the message.
- Showing the ability to use language, style and tone in ways that suit the intended audience, and to recognise their use by others.
- Using appropriate techniques to reinforce oral communication, check how well the information is received and support the understanding of those listening.
- Using non-verbal communication to assist in conveying meaning and receiving information, and recognising its use by others

Listening

- Listening attentively and responding sensitively to contributions made by others.

Reading

- Find, and select from, a range of reference material and sources of information, including the Internet.
- Use and reflect on a range of reading strategies to interpret texts and to locate information or meaning.
- Identify and record the key information or messages contained within reading material using note-taking techniques.

Writing

- Write fluently, accurately and legibly on a range of topics.
- Select appropriate format and style of writing for different purposes and different readers.
- Use spelling and punctuation accurately in order to make meaning clear.
- Understand and use the conventions of grammar (the forms and structures of words, phrases, clauses, sentences and texts) consistently when producing written text.

Numeracy

Personal, social and cultural factors influencing numeracy learning and development

- The different factors affecting the acquisition and development of numeracy skills.
- The importance of numeracy in enabling users to participate in, and gain access to, society and the modern economy.
- Potential barriers that hinder development of numeracy skills.
- The main learning difficulties and disabilities relating to numeracy skills learning and development.
- The common misconceptions and confusions related to number-associated difficulties.

Explicit knowledge of numeracy communication and processes

Communication

- Making and using decisions about understanding.
- Communicating processes, and understandings.

Processes

- A knowledge of the capacity of numeracy skills to support problem solving.
- Making sense of situations and representing them.
- Processing and analysis.
- Using numeracy skills and content knowledge.
- Interpreting and evaluating results.
- Communicating and reflecting on findings.

Personal Numeracy Skills

Communication

- Communicate with others about numeracy in a open and supportive manner.
- Assess own, **and other people's, understanding.**
- Express yourself clearly and accurately.
- Communicate about numeracy in a variety of ways that suit and support the intended audience, and recognise such use by others.
- Use appropriate techniques to reinforce oral communication, check how well the information is received and support understanding of those listening.

Processes

- Use strategies to make sense of a situation requiring the application of numeracy.
- Process and analyse data.
- Use generic content knowledge and skills.
- Make decisions concerning content knowledge and skills.
- Understand the validity of different methods.
- Consider accuracy, efficiency and effectiveness when solving problems and reflect on what has been learnt.
- Make sense of data.

- Select appropriate format and style for communicating findings.

Information and Communication Technology (ICT)

Personal, social and cultural factors influencing ICT learning and development.

- The different factors affecting the acquisition and development of ICT skills.
- The importance of ICT in enabling users to participate in and gain access to society and the modern economy.
- **Understanding of the range of learners' technological and educational backgrounds.**
- The main learning disabilities and difficulties relating to ICT learning and skill development.
- Potential barriers that inhibit ICT skills development.

Explicit knowledge about ICT

Communication

- Making and using decisions about understanding.
- Communicating processes and understandings.

Processes

- Purposeful use of ICT.
- Essential characteristics of ICT.
- How learners develop ICT skills.

Personal ICT Skills

Communication

- Communicate with others with/about ICT in a open and supportive manner.
- **Assess own, and other people's, understanding.**
- Express yourself clearly and accurately.
- Communicate about/with ICT in a variety of ways that suit and support the intended audience, and recognise such use by others.
- Use appropriate techniques to reinforce oral communication, check how well the information is received and support understanding of those listening.

Processes

- Using ICT systems.
- Finding, selecting and exchanging information.
- Developing and presenting information.

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