OXFORD BROOKES UNIVERSITY

department for education and skills
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Unit 2, Section 1
Developing Teaching and Learning for Gifted and Talented Pupils

Key issues

- The development of curricula and programmes for the gifted and talented has been influenced by theoretical models of learning
- These models of learning can help promote a deeper understanding of effective approaches to teaching and learning for gifted and talented pupils
- Models furnish a coherent framework within which to consider the learning needs of these pupils, and therefore the development of the distinct teaching and learning programme within your school
- No one model exists that can be applied directly to the curriculum of schools in this country, but aspects of models can offer educational principles which will underpin the teaching and learning programme for gifted and talented pupils.

Planning a curriculum for gifted and talented learners

As we have seen in earlier units, the planning of teaching and learning for gifted and talented pupils means differentiating the curriculum according to the needs and the nature of the learner. The notion of curriculum as defined here is a set of learning experiences selected according to a specific rationale. Such a notion cannot be not fixed and immutable, subject as it is to differing views of the purposes of education, the needs of society, the nature of learning, and the needs of the learner. Our current National Curriculum is no less susceptible to a critique of this kind, emerging as it does from a particular view of a number of essentials. One such is the value of certain types of knowledge, and of particular concepts of the structure of knowledge. Another is how these should be organised into curriculum domains, and the proposition that there exists a learning hierarchy of knowledge, skills and understanding.

Eisner (1994) presented five concepts of curriculum, or orientations, which have shaped the thinking of many educators, and which represent strong philosophical foundations for what a view of a curriculum for the gifted might be:

- Curriculum as the development of cognitive process: *this orientation in the education of the gifted has focused on the development of processes and skills, and has led to the adoption of curriculum materials organised around higher level thinking skills.*
- Curriculum as technology: *this approach is also process- oriented but focuses on the organisation of the curriculum into what the student is taught and what he*

or she produces. It relies heavily on stated behavioural or performance objectives, with measurable outcomes which can be tested to determine educational achievement (cf the National Curriculum)

- Curriculum as personal relevance*: this promotes a child-centred model which values curriculum experiences tailored to individual students' needs and interests.*
- Curriculum as social reconstruction: *this view of curriculum holds that the purpose of educational institutions is to be agents of social change.*
- Curriculum as academic rationalism: *this curriculum orientation has its roots in the Western tradition of rational humanism.*

The most effective curricula for the gifted and talented incorporate all these orientations to some extent (Van Tassell-Baska, 2000).

Piirto (2000) adds a further two which she says should be considered by curriculum theorists in the field of the gifted and talented:

- Teaching for insight: *this emphasises the need for students to be actively involved in a diverse range of problem-based learning activities which draw on a multiplicity of 'intelligences'*
- Postmodernist*: this highlights the pre-assessing of students for the purpose of individualising the curriculum; developing students' interests; and developing specific talents.*

Piirto makes a plea for all educators to take a critical stance towards curriculum design and development, alert to their implications and to conscious and unconscious curriculum choices and predispositions.

Eisner's orientations undoubtedly offer a convenient and comprehensive approach to thinking about a programme for the gifted and talented. However, most designers of curricula conceive of curriculum as composed of content, process, product, and learning environment or climate. A curriculum for the gifted and talented represents an interaction between these elements, modified to meet their needs. Curriculum development for the gifted and talented then means integrating these successful approaches into a teaching and learning programme

Van Tassell-Baska (2000) outlines several fundamental principles upon which a differentiated curriculum for the gifted and talented should turn:

1. The *level* of the curriculum should be sufficiently advanced to interest and challenge the gifted learner
2. The *pace* at which the curriculum is offered must be

adjusted to accommodate both faster and slower rates, depending on the nature of the curriculum challenge
3. The *complexity* of the curriculum should reflect the capacity of the gifted learner to engage in simultaneous rather than linear processing of ideas
4. The *depth* of the curriculum should allow gifted and talented learners to continue exploring an area of special interest to the level of an expert.

The organisation and nature of the curriculum should clearly be informed by current concepts, based on research, of how gifted and talented pupils learn. Thus, curriculum planning can benefit from research into expertise, models of intelligence, and domain-specificity, i.e. the learning and teaching peculiar to particular knowledge/curriculum areas.

Teaching models in gifted education

Research on an appropriate curriculum for the gifted and talented is relatively recent. In the 1960s and 1970s educators in this field conceptualised some general principles about such a curriculum, based on a range of teaching and learning models. The development of a teaching and learning programme for gifted and talented learners, in the context of the National Curriculum and of government initiatives in education (in particular opportunities in the 14-19 Curriculum), needs to be informed by thinking about the most apt curriculum models for the purpose.

A teaching and learning model is a structural framework that serves as a guide for developing specific educational activities and environments. A model can be highly theoretical and abstract, or it can be of a more practical nature. There are, however, certain common distinguishing features:

- Underlying purpose, or area of concentration
- Underlying assumptions, explicit or implicit, about the characteristics of learners and the learning process
- Guidelines for the development of day-to-day experiences
- Definite patterns and learning requirements
- A body of research surrounding the development and evaluation of the model in question.

Working 20 years ago, Joyce and Weil (1986) identified 80 teaching models which could be said to be recognisable, and divided them into families based on the areas they emphasise:

- 'Social interaction (active democracy)
- Information processing (data handling)
- Personal models (self-concept)
- Changing observable behaviours (behaviour

modification).'

These areas continue to provide an interesting starting point when we are looking to create challenges for gifted and talented pupils. Recent developments such as the national teaching strategies might seem to accord more with points two and four, while individual schools may see the need to focus on one or three**.** Some might be best explored through provision within the classroom and some through whole school or out-of-school enrichment activities.

Let us suppose, then, that we are constructing a curriculum, or a teaching and learning programme, that meets the needs of gifted and talented children by incorporating modifications to the content, process, product, and learning environment. This requires an approach which involves specific strategies for accomplishing these changes. Several factors must be considered before selecting an approach:

- The setting/context
- Application to situation
- Comprehensiveness
- Flexibility/adaptability
- Practicality
- Validity.

There are teaching models specifically designed for gifted and talented pupils, for example Renzulli's Enrichment Triad. There are models which are hierarchical in nature and in which the upper end of the hierarchy is particularly relevant for the gifted and talented, as in Bloom's taxonomy. Lastly, there are models which provide a way of looking at teaching in general and at possibilities for gifted and talented pupils in particular, for example that of Bruner. All of these models are outlined in the next sub-section.

Models in the USA and Britain

Many of the models were developed in the USA, where programmes for gifted and talented pupils have been based on the use of one or another model. In Australia, too, models have provided the basis of much work on developing curriculum provision for the gifted and talented.

In Britain, the use of models in their totality is much less in evidence. Nevertheless, aspects of these models do underpin much of our work, and to be aware of them is to be better able to draw upon them when creating our own responses. Many of the ideas in these models are to be found in the National Curriculum, and form the basis of work by government agencies to provide guidance on challenge for the gifted and talented. The use of teaching models is expanding in this country. The literacy and numeracy strategies might, for example, be described as teaching models to suit their own context. The Key Stage 3 Strategy provides a model which incorporates elements from instructional designs, hierarchical learning, and subject structures. The guidance and training for Teaching and Learning in the Foundation Subjects borrow from theoretical approaches such as Gardiner's Multiple Intelligences, Smith's Accelerated Learning, and Bloom's Cognitive Taxonomy. Schools in the USA are more likely to adopt a model in its totality, whereas in this country elements from the various models are more likely to be adapted to play a part in the teaching of the statutory curriculum. For example, Renzulli might provide useful approaches to thinking about enrichment opportunities, and Bruner's recommendations may be adapted when planning the curriculum for gifted and talented students in Key Stages 4 and 5.

In this section we are going to focus on three models. They have been chosen because they form the basis of much work on gifted and talented pupils, and because they are very different in nature and approach. Below is a brief summary of each of the models. You may be familiar with some already.

1. Benjamin Bloom and David Krathwohl - Cognitive Taxonomy

All taxonomies are based on the idea of a hierarchy. The taxonomy developed by Bloom embodies the view that some types of thinking are of a higher level than others, and that types of thinking can be both observed and characterised.

- Bloom's model assumes that by using higher levels of thinking we can become better thinkers.
- The model was not specifically created for the gifted, but educators of gifted children believe that these pupils are already working primarily at the higher levels. Bloom maintains that thinking should move through the levels. Sometimes, programmes which focus only on

higher levels of thinking have led to gaps in basic skills.
- Bloom's model can be used effectively to enhance a basic skills-led curriculum.
- The National Curriculum has a strong emphasis on basic skills and some emphasis on higher order thinking. This is an ideal basis for the development of increased use of higher level thinking.
- National Strategy: Because of its resonance with the hierarchical nature of National Curriculum levels of achievement, Bloom' model is gaining popularity at local and national levels. It informs part of the thinking skills development material for the Key Stage 3 strategy.

2. Jerome Bruner – The Basic Structure of a Discipline
Bruner believes that all subjects have a basic structure. If learners can become familiar with the structure it empowers them to move forward and also to apply elements of the structure in other contexts. In other words, they are able both to use knowledge and to apply it.

- Bruner sees the best way of learning as through modelling expert behaviour, in effect an apprenticeship model. In schools, this is often seen in music and sport, but less so in academic subjects.
- The inherent problem for Bruner is that experts cannot agree on the basic structure of subjects. It could be said that the National Curriculum sets out the basic structure of subjects and so makes it easier to work with Bruner's ideas than is the case in the USA, which has less of a subject-based curriculum. The literacy strategy is a good example of a basic structure being worked through.
- In Bruner's model, learning is not linked to age but to levels of understanding.
- When Bruner's ideas were worked up in the USA, in 'Man: a Course of Study', the programme proved very successful with the gifted, but problematic for others. Hence, Bruner-like approaches may have particular resonance for the gifted.

3. Joseph Renzulli – The Enrichment Triad
This is the only model of our three which was specifically written for the gifted.

- Renzulli believes that provision for gifted children should be qualitatively different from that which is available to others.
- His underlying theory is the 'three-ring' conception of giftedness: creativity; commitment to the task; and above-average general ability.
- In recent years, Renzulli has advocated the use of his Enrichment Triad model in the 'regular school'.
- The model makes certain assumptions. The first is that

some competencies should be learned by all students, including the gifted, but gifted students work quickly and can 'compact' the curriculum to make space for enrichment work., that is to say they make secure progress through the curriculum at a greater rate. Secondly, the styles of learning of gifted students must be respected, and thirdly, enrichment can take place in any setting.

- The Enrichment Triad model has three types of activities. The first two of these – general exploratory activities and process thinking – can be used by all; investigations of real problems by individuals and groups are just for the gifted.
- This model is designed with the USA school system in mind. Our own National Curriculum assumes that **all** children can undertake the third of the above types of activity, and that children can move freely through the curriculum without the need for compacting it, in the sense described above.

Schools beginning to plan using Renzulli's model, however, have found it a useful tool for developing their enrichment programme. This is because it ensures a link between in-class and extra-curricular learning, a link which according to Ofsted findings is too often lacking (see Unit 2 Section 4).

The research indicates that gifted learners are best served by a confluent approach which combines elements of different models according to local need and context. At the same time, the principle of coherence should operate when curricula are being planned, or programmes will be fragmented. (Van Tassell-Baska, 2000). Whatever model or combination of models is selected, the role of the teacher is paramount in determining success (Maker, 1995).

Activity 2.1

Reflection
In relation to your own subject area, and one other, consider the demands which the National Curriculum and/or relevant national strategies make on higher order processes.

- How might these demands be more effectively met in the classroom?
- Identify ways in which one or more of the teaching and learning models described in this section may be adapted to:
  - a learning and teaching programme for gifted and talented pupils
  - enrichment programmes, both within and outside the national curriculum subject areas.

This could be an ongoing exercise as part of the school's planning for gifted and talented pupils.

Learning outcomes

- Become familiar with a range of models influential in the teaching of gifted and talented pupils.
- Understand the principles underlying different models, and their strengths and limitations.
- Recognise the role that theoretical models of learning have to play in developing the distinct teaching and learning programme for gifted and talented pupils in your school.

Further suggested readings

Calvin Taylor (1995) "The Multiple Talent Approach" in **Maker, C.J. & Nielson, A.B.** *Teaching Models in Education of the Gifted* 2nd Edition Texas: PRO-ED

George Betts (1995) "The Autonomous Learner Model " in **Maker, C.J. & Nielson, A.B.** *Teaching Models in Education of the Gifted* 2nd Edition Texas: PRO-ED

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Heller, K. Monks, F. Passow, A.H. (eds) (2000) *International Hand book of Giftedness and Talent 2nd Edition* New York: Pergamon

Joyce, B., Calhoun, E. & Hopkins, D. (1997) *Models of learning – tools for teaching* Buckingham : OUP

Maker, C. J. & Nielson, A. B. (1995) *Teaching Models in the Education of the Gifted* Second edition Texas: PRO-ED

Montgomery, D. (ed) (2000) *Able Underachievers* London: Whurr

Van Tassell-Baska, J. (1998) *Excellence in Educating Gifted and Talented Learners* Third edition Denver: Love Publishing