Teaching Exceptionally Able and Dual Exceptional Students Inclusively
An Introduction for Post-Primary Schools

Special Education Support Service – Models of Provision
- Funding for courses via Supports Scheme
- SESS-designed seminars, conferences and courses
- School visits
- Funding for accredited courses
- Telephone and e-mail support
- On-line learning
- In-school professional development
- Group professional development initiatives
- Individual professional development
- Online lending library
- Online resources

Special Education Support Service

Aims:
- To enhance the quality of teaching and learning with particular reference to the education of children with special needs
- To design and deliver a range of professional development initiatives and supports for school personnel
- To consolidate and co-ordinate existing professional development and support
Expected Outcomes

Participants will have:
- an understanding of the concept of exceptional ability and dual exceptionality
- an awareness of the role of assessment in identifying exceptionally able and dual exceptional students
- an understanding of the particular emotional and social needs of students with EA and DE
- been introduced to the concept of metacognition
- knowledge of some differentiated teaching strategies

Content

**Topic 1:**
What do we mean by Exceptionally Able and Dual Exceptional?
- “What are we talking about?”

**Topic 2:**
Assessment, Identification and Needs
- “How do we find out who they are?”

**Topic 3:**
Teaching Exceptionally Able and Dual Exceptional Students Inclusively
- “How do we teach them?”
Topic 1

‘Exceptionally Able’
‘What are we talking about?’

Qualitative Descriptions:

> 130  very superior
120-130  superior
110-120  high average
90-110  average
85-90  low average

Perspective 1: Intelligence Quotient (IQ)
(Intelligence Quotient, William Stern, 1912)

Qualitative Descriptions:
> 130  very superior
120-130  superior
110-120  high average
90-110  average
85-90  low average

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Perspective 2: Multiple Intelligences

Perspective 3: Renzulli’s link between Ability and Achievement

Perspective 4: Higher Order Thinking (‘HOT’)

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Definition: NCCA 1

Students who require opportunities for enrichment and extension that go beyond those provided for the general cohort of students.

...good practice for exceptionally able students is also good practice for all students...

NCCA 2007

Definition: NCCA 2

- Approximately 5-10% of the school population may be exceptionally able
- A minority will be profoundly exceptionally able, possibly 0.5%
- No single measure that defines exceptional intelligence levels but the following can be used:
  - Able: IQ 120-129
  - Exceptionally Able: IQ 130-169
  - Profoundly Able: IQ 170+
Why ‘Special’?

- Dispel the myths
- Realise potential
- Avoid under-identification
- Avoid under-achievement
- Entitlement to an appropriate education (e.g. Education Act 1998 and EPSEN Act 2004)
- Unique social and emotional needs

Dual Exceptionality (DE)

High ability, with a difficulty that affects some aspects of learning, for example:

Dyslexia, DCD (Dyspraxia), Attention Deficit Disorder, Asperger’s Syndrome, Hearing and Visual Impairment, physical disability or language delay or impairment

- Difficulties may mask Ability
- Ability may mask Disability

Dual Exceptionality – Strengths and Challenges

Some Strengths
- Superior vocabulary
- Highly creative
- Resourceful
- Acurious
- Imaginative
- Questioning
- Problem-solving ability
- Sophisticated sense of humor
- Wide range of interests
- Advanced ideas and opinions
- Consuming interest

Some Challenges
- Stubborn
- Easily frustrated
- Manipulative
- Aspinionated, argumentative
- Poor communication skills
- Difficulty with written expression
- Highly sensitive to criticism
- Inconsistent academic performance
- Lack of organization and study skills
- Difficulty with peer social interactions
- May prefer adult company

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**Topic 2**

**Assessment and Needs**

“Who are they are, and what are their needs”? 
See the student, not the label.

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**A Continuum of Assessment Methods**

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**Model of Identification**

Involvement in Equality of Challenge Initiative - S.E.N. team & Guidance team focus on a Model of Identification (Example of practice from EoC)

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*Special Education Support Service 2013*
Risk of Under-identification

- Where there are specific learning disabilities
- Where there are sensory or physical impairments
- From disadvantaged and marginalised background
- Where English is not the first language
- Where students do not fit stereotypical profiles of ‘exceptionally able’

What does Assessment Tell Us?

Assessment provides essential information in relation to:

- a student’s academic development
- sharing information with parents / relevant personnel
- matching the student’s learning to the curriculum
- checking the effectiveness of the teaching programme
- progress / achievement
Formal Testing - Attainment

Some attainment tests used in-school
Â· Wide Range Achievement Test 4th Edition (WRAT-4)
Â· New Group Reading Test
Â· Access Maths Test/ Maths Competency Test

The cognitive test used widely in-school now
Â· CAT 3

Example of test used by psychologists
Â· Wechsler Intelligence Scales for Children (WISC)
(See more information on www.sess.ie)

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Testing
Interpreting Scores

<table>
<thead>
<tr>
<th>Reading Vocabulary</th>
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<th>Total Reading</th>
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<td>PR</td>
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Testing
Interpreting Scores

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<th>STUDENT</th>
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<td>SS</td>
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<td>B</td>
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<td>C</td>
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</table>

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Teacher Observation - Indicators

- Shows superior reasoning powers
- Persistent intellectual curiosity
- In-depth interests
- Markedly superior in written and/or spoken vocabulary
- Reads avidly
- Learns quickly and retains easily
- Shows insight into arithmetical problems
- Shows creativity or imaginative expression
- Demonstrates responsibility and independence
- Sets high standards
- Initiative and originality in intellectual work
- Has social poise
- Appear easily bored, arrogant or socially inept

Teacher Observation - Perceptions and Profiles

Profiles of Gifted and Talented Students

Betts and Neihart's six profiles of gifted and talented students are Not intended to describe any one child completely.

1. The Successfuls
   - Have learned the system - no behaviour problems
   - Are identified
   - Attainment limited to system expectations - may underachieve in college and life

2. The Challengings
   - Highly creative and divergently gifted - rich inner-life
   - Frustrated, obstinate, tactless, sarcastic, low self-esteem
   - Often unidentified - at risk

3. The Undergrounds
   - Mostly girls in puberty
   - Have lost their interests and passions - want to conform
   - Were pushed in school and home - feel insecure

Perceptions and Profiles

Betts and Neihart (1988)
Perceptions and Profiles

4. The Dropouts
   - Have not been identified, interests not met
   - Angry and dropout
   - Divert to out of school interests

5. The Dual Exceptional
   - Disability masks ability
   - Often not identified
   - Schools often focus on weaknesses rather than strengths

6. The Autonomous Learner
   - Have learned the system independent and self directed
   - Use it for new opportunities rather than conformity
   - Accomplished, recognised, affirmed

Ken Robinson Commentary

(Special Education Support Service 2013)

Social and Emotional Needs

Examples of issues provided by teachers at SESS Seminar

- Challenging behaviour in class.
  - Problems arising include boredom, unwillingness to complete activities even when other students are engaged
- Need to develop social and communication skills
- Excellent reader, intelligent answers and input, but may often look bored despite other children looking very engaged
- Student may become disruptive when finished work earlier than others. May have little respect for students considered 'less able'

(Special Education Support Service 2013)
**Social and Emotional Needs: Asynchronous Development**

Emotional or social development may not be commensurate with:
- Academic development or cognitive ability
- Physical growth
- Skills may not develop evenly

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**Self-Criticism/Concept**

What students cannot do (due to disability) may be more emphasised than abilities.

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**Social and Emotional Needs: Emotional Intensity**

Five areas in which children who are exceptionally able may be supersensitive:
- Intellectual
- Psychomotor
- Sensual
- Imaginational
- Emotional
Supporting the Social and Emotional Needs of the Exceptionally Able Student

- Support in becoming creative and adventurous learners
- Teach them to embrace risk and see failure as a learning event
- Assist in developing autonomy
- Develop and support social interactions with peers - use co-operative grouping and learning
- Teach metacognitive skills
- Use Assessment for Learning strategies
- Develop resilience and happiness by applying the principles of positive psychology
- Teach appropriately using differentiation

Topic 3
Teaching Exceptionally Able Students Inclusively

‘How do we teach them?’

National Policy Framework
**School Policy**

WSE Inspection Report – Extract 2012

It is recommended that the school develop whole-school policies on the support of exceptionally able students: it is recommended that any future planning and policy review should take cognisance of how best to support the needs of students who are deemed exceptionally able.

**Inclusive System in Practice**

NEPS Continuum of Support

- Classroom Support
- School Support

Staged Approach: SpEd 02/05

- Stage 1
- Stage 2
- Stage 3

**Zone of Proximal Learning: Focused Teaching**

Tasks beyond ability, even with assistance (Anxiety)

Zone of Proximal Development: What the learner can do with assistance

Current Ability Level

(Zone of Proximal Development)

Level of COMPETENCE
**Differentiation:**  
Key Concepts and Terminology

**Differentiation / Challenge Through**

- Higher Order Thinking
  - Analyzing
  - Evaluating
  - Creating

- Extension
  - Breadth / Complexity
  - Depth
  - Acceleration

- Enrichment
  - Relevant to Curriculum & Continuum of Support

**Classroom Strategies – Differentiation by:**  
Task, Outcome, Resource, Support, Pace, Dialogue

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**First Year Initiative: Maths**

- **Higher Order Thinking**  
  Year Plan that provided opportunities for Analysis & Evaluation e.g. teaching extensions from base topics, Laws of Indices with Order of Operations, Problem solving Equations in Algebra, Peer Teaching - purchase of class sets of small white boards  
  Students devised own rules for mathematical concepts

- **Extension**  
  Problem of the day, one term, emphasis on problem solving & critical thinking, each teacher week of developing problems  
  Group Project on statistics with presentation

- **Enrichment**  
  All Students participated in 1.M.T.A. first year competition  
  Student won Regional Final  
  Three students who came in top 25 Nationally  
  Maths Table Quiz at end of term C.T.V.I.

**Problem of the Day**  
**Question:** Can you make 10 plus 4 = 2  
**Answer:** 10 o'clock + 4 hours = 2 o'clock

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**Index Cards**

- Cards numbered according to module/chapter
- Task on back of card
- Space for name, date, success criteria, product and teacher and student signatures on front
- File as record of work completed

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Learning Contracts and Lesson Plans

STUDENT NAME & CLASS GROUP

Subject Area: ___________ Date and Time:_________________________

The Learning Aim of my work today will be: __________________________________________

The activity I have chosen is:________________________________________

The success criteria for this task will be:

a)_____________________________________________________________

b)_____________________________________________________________

c)_____________________________________________________________

I intend to fulfil these criteria

Student Signature: ______________________

Teacher Signature: ______________________ Date:______________________

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DIFFERENTIATION – ‘HOT’

Geography: Studying Volcanoes

Create
A. Write a detailed analysis, based on the description of the 79 A.D. eruption of Vesuvius by Pliny and others, on the effects that a similar eruption would have on the same geographic area today. Include a discussion of possible effects on services, business, agriculture, trade, communications, transport and tourism.

Evaluate
A. Choose one well-known volcano and assess to what extent it has, through time, affected the lives of the people living nearby. Would you say that the effects were, on balance, more harmful than beneficial? Explain why this is so.

Analyze
A. Read a story/watch a film about a volcanic eruption and write a critical review of it. Analyse the scientific accuracy of the description of the eruption and its effects.

Apply
A. Make a word-search which includes twenty keywords relating to volcanoes. Make pictorial clues.

Understand
A. What causes a volcano to erupt?
A. Describe four effects that a volcano might have on the countryside surrounding it.

Remember
A. Draw and label a diagram of a volcano
A. List four different types of volcano

Bloom’s Revised Taxonomy
Remembering
Recalling information
Recognising, listing, describing, retrieving, naming, finding

Understanding
Interpreting, summarising, paraphrasing, classifying, explaining

Applying
Implementing, carrying out, using, executing

Analysing
Comparing, organising, deconstructing, interrogating, finding

Evaluating
Justifying a decision or course of action
Checking, hypothesising, critiquing, experimenting, judging

Creating
Putting elements together to generate new or alternative ideas/products, or ways of viewing or doing things

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Bloom’s Taxonomy applied to understanding the Pythagoras Theorem

**Create**
- Describe how you would teach a younger sibling the concept and use of the Pythagorean Theorem. Communicate your understanding through exploratory examples and sample problems.

**Evaluate**
- How could you effectively assess someone’s understanding of the Pythagorean Theorem?
- Persuade me of the usefulness of the Pythagorean Theorem in a career area of interest to you.

**Analyze**
- If the hypotenuse of a right triangle measures 169 cm, what are the possible whole number lengths of the other two legs?
- If I need to reach a window 13 ft. off the ground and I only have 5 ft. of room from the base of the wall, at most how long does my ladder need to be?

**Apply**
- Explain how you would use the Pythagorean Theorem to find the height of an equilateral triangle of side 6 cm.

**Remember**
- State the Pythagorean Theorem
- True/False: The Pythagorean Theorem only works for right triangles

DIFFERENTIATION - ‘HOT’

**Create**
- Based on the theme(s) of the poem, the date and place that the poem was written and what you know of the poet and her circle, compose a conversation that might have taken place between Bishop and a companion after the event described in the poem.

**Evaluate**
- What effect was the poet trying to achieve with her use of images such as stained wallpaper, scratched isinglass, and tarnished tinfoil? In your opinion, how successful was the poet in achieving this effect?

**Analyze**
- Compare this poem with *The Filling Station*. Identify and describe three similarities and three differences between the two poems.

**Apply**
- Identify four similes that Bishop uses in this poem. Why does she use them?

**Understand**
- What do you think this poem is about? In your own words, describe the events of the poem.

**Remember**
- List five details that Bishop gives in describing the fish. Where do the events described in the poem take place?

Positive Learning Culture

- Set homework at the beginning of the lesson.
- Share Learning Objectives with students
- Provide written Criteria for Success in advance of assessment
- Provide exemplars to illustrate standards
- Encourage students to reflect on and improve their work
- Consider the type of feedback which will be provided

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Positive Learning Culture
Positive Teaching for Exceptionally Able Students avoids:

- giving more of the same to students who finish assignments quickly - they see it as punishment
- marking 100% or A1 most of the time - encourage intellectual adventure, exploration and uncertainty
- being defensive when being challenged about your facts or knowledge
- putting the challenging student in his/her place

Assessment for Learning Feedback

Differentiation / Extension by Dialogue

- How many questions are asked in a 40-minute period?
  - On average 50.6 (students ask 1.8)
- Which level of Bloom's Taxonomy would you say most questions come from?
  - The majority come from the Remember level
- How long do teachers wait for an answer from a student?
  - Many teachers wait less than 1 second
- How long does it take for Higher Order Thinking?
  - ??
**Wait Time 1 and Wait Time 2**

Two key places where pauses greatly increase quality of responses:
- WT1 immediately after you ask a question
- WT2 immediately after student responds

When used, students:
- Give longer and more complex answers
- Support answers with evidence
- Ask more questions
- Talk more to other students

**Differentiation by Dialogue**

**Asking Questions, Making Meaning**

- Students devise their own questions for the class based on Higher Order Thinking
- Pair-problem solving
  - Differentiating for able learners & learners with SEN

"We learn more by looking for the answer to a question and not finding it, than we do from learning the answer itself."  
Lloyd Alexander

**Question Disk**

- What do you suppose?
- What will?
- What if?
- What if not?
- What if then?
- What if not then?
- What will if?
- What if if?

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Differentiation by Dialogue

Asking Questions, Making Meaning

A Question Board

<table>
<thead>
<tr>
<th>Topic</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>How many ways..?</td>
<td>How do you suppose..?</td>
<td>What if..?</td>
<td>Can you suggest..?</td>
<td>What do you think..?</td>
<td>Knowing what you know, how would..?</td>
</tr>
</tbody>
</table>

Adapting the Process

- Discussion groups, writing, reading, active learning, brainstorming, sequence boxes, concept maps, project work, whole class instruction, peer tutoring, one-to-one, Co-operative learning, group work, Co-operative teaching, INTERACTIVE WHITEBOARDS, power point presentations, websites, CDs, DVDs, online textbooks,

Adapting the Product

- Cartoons / story boarding
- Mind maps
- PowerPoint Presentation
- Dramatisation
- Video / tapes
- Model making
- Art / design
- Writing / Project work
Differentiation by Outcome

How students express their learning

A Flexible Classroom

- Whole class instruction
- Individual work
- Pair and Share
- Co-operative group work
  - Homogenous groups
  - Heterogeneous groups
- Independent, self-directed work

Differentiation in a Nutshell

- Developing the higher order skills - analysis, synthesis and evaluation
- Open-ended and research-based tasks
- Group work
- Homework
- Enrichment activities - curriculum-related and structured
- Introducing cross-curricular links
- Including the students’ special interests
Curriculum Compacting

- Students pre-tested before module of learning
- Those with 80% or above offered learning contract
- Higher challenge, replacement or instead of activities provided for those who are competent in that module of learning

Extension

**Extension:**
The horizontal/extension of the curriculum to challenge students

**Breadth:**
Helping the students to study the topic in breadth and complexity while applying higher-order activities - making connections, identifying relationships, etc.

**Depth:**
Encouraging the student to explore a topic in greater detail - moving from Concrete to abstract, Known to unknown, Literal &knowing to synthesising/creating

Extension Activities for Geography: Volcanoes
Noughts and Crosses Menu

<table>
<thead>
<tr>
<th>Activity</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Write a description of a Recent volcanic eruption. Identify the type of eruption and its duration.</td>
<td>Include some eyewitness accounts of the event.</td>
</tr>
<tr>
<td>Make a news sheet that might have been produced in Rome the day after the eruption of Vesuvius in 79 A.D.</td>
<td>Find the meanings of these terms: eruption, magma, volcanic, lava. Present the information to the class in an illustrated presentation.</td>
</tr>
</tbody>
</table>
| Using the internet site www.geology.com/volcanoes Find out some interesting news about a volcano and prepare a PowerPoint presentation on it. | Research volcanic activity on Mars. Record your research in an interesting way. (power, recorded interview...)
| Hawaiian, Strombolian, Pyroclastic, Plinian and Fracture: are different types of eruptions: can you discover about them? | Read a story/watch a film about a volcanic eruption and write a critical review of it. Find out about an historic eruption and tell what effect it had on the lives of people living nearby. |
Acceleration
(A report for the Council of Curriculum, Examinations and Assessment [CCEA], 2006)

- Acceleration: The ‘vertical’ extension of the curriculum by introducing content at an earlier stage or quicker pace
- Some students progress at a faster than usual rate and/or younger than the typical age
- They need to learn at a level appropriate to their ability level
  - To avoid boredom from lack of challenge, promote good higher-order study skills
  - Capitalise on their interests and abilities

Enrichment
Activities Beyond the Classroom / School

- Science / Writing club
- History Trail / Field Trip
- Visit to factory / business
- Museum / Art Gallery
- Mini courses
- Invited speakers
- Summer Schools
- Theatre
- On-line courses
- Extra-mural courses

Metacognition - A Brief Introduction

“Schools should be communities where students learn to learn” (Brown et al., 1993)

'Setacognition for the Classroom and Beyond'
SESS 2009
See www.sess.ie
What is metacognition?

1. Knowing about your thinking and learning
2. Knowing how to managing your thinking and learning

Metacognition and Exceptionally Able / Dual Exceptional Students

- Better metacognitive knowledge but not better at self-regulation
- Good working memory means that they may bypass good planning techniques
- Failure can be stressful, learning to evaluate performance is valuable
- A chance to help dual exceptional students achieve their full potential?

Last Word …..

“The joy of learning is as indispensable in study as breathing is to running.”

Simone Weil, Waiting for God
THANK YOU!

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