

CURRICULUM DIFFERENTIATION is a broad term referring to the need to tailor teaching environments and practices to create appropriately different learning experiences for different students. Keirouz (1993) suggests typical procedures in the case of gifted and talented students include:

- deleting already mastered material from existing curriculum,
- adding new content, process, or product expectations to existing curriculum,
- extending existing curriculum to provide enrichment activities,
- providing course work for able students at an earlier age than usual, and
- writing new units or courses that meet the needs of gifted students.

Maker's model of differentiated curriculum (Maker 1982a, 1982b, 1986) suggests that curriculum needs to be differentiated in terms of:

**1. Learning environment:** The aim is to create a learning environment which encourages students to engage their abilities to the greatest extent possible, including taking risks and building knowledge and skills in what they perceive as a safe, flexible environment. It should be:

- **student-centered** - focusing on the student's interests, input and ideas rather than those of the teacher,
- **encouraging independence** - tolerating and encouraging student initiative,
- **open** - permitting new people, materials, ideas and things to enter and non-academic and interdisciplinary connections to be made,
- **accepting** - encouraging acceptance of others' ideas and opinions before evaluating them,
- **complex** - including a rich variety of resources, media, ideas, methods and tasks, and
- **highly mobile** - encouraging movement in and out of groups, desk settings, classrooms, and schools.

**2. Content modification:** The aim is to remove the ceiling on what is learned, and use the student's abilities to build a richer, more diverse and efficiently organised knowledge base. This building can be facilitated by encouraging:

- **abstractness** - with content shifting from facts, definitions and descriptions to concepts, relationships to key concepts, and generalizations,
- **complexity** - with content shifting to inter-relationships rather than considering factors separately,
- **variety** - with content expanding beyond material presented in the normal program,
- **study of people** - including the study of individuals or peoples, and how they have reacted to various opportunities and problems, and
- **study of methods of inquiry** - including procedures used by experts working in their fields.

**3. Process modification:** The aim is to promote creativity and higher level cognitive skills, and to encourage productive use and management of the knowledge the students have mastered. This can be facilitated by encouraging:

- **higher levels of thinking** - involving cognitive challenge using Bloom's Taxonomy of Cognitive Processes (1984 - see Appendix A for brief details), logical problems, critical thinking and problem solving,
- **creative thinking** - involving imagination, intuitive approaches and brainstorming techniques,
- **open-endedness** - encouraging risk-taking and the response that is right for the student by stressing there is no one right answer,
- **group interaction** - with highly able and motivated students sparking each other in the task, with this sometimes being on a competitive and sometimes on a cooperative basis (depending on the task and its objectives),
- **variable pacing** - allowing students to move through lower order thinking more rapidly but allowing more time for students to respond fully on higher order thinking tasks,
- **variety of learning processes** - accommodating different students' learning styles,
- **debriefing** - encouraging students to be aware of and able to articulate their reasoning or conclusion to a problem or question, and
- **freedom of choice** - involving students in evaluation of choices of topics, methods, products and environments.

**4. Product modification:** The aim is to facilitate opportunities for talented students to produce a product that reflects their potential. This can be encouraged by incorporating:

- **real problems** - real and relevant to the student and the activity,
- **real audiences** - utilizing an "audience" that is appropriate for the product, which could include another student or group of students, a teacher (not necessarily the class teacher), an assembly, a mentor, a community or specific interest group,
- **real deadlines** - encouraging time management skills and realistic planning,
- **transformations** - involving original manipulation of information rather than regurgitation, and
- **appropriate evaluation** - with the product and the process of its development being both self-evaluated and evaluated by the product's audience using previously established "real world" criteria that are appropriate for such products.

A number of management strategies that are often useful in implementing curriculum differentiation strategies include:

- **the use of contracts** - allowing individualized and student negotiated programs and promoting the student's time-management skills and autonomy,
- **conferencing** - allowing dedicated student negotiation and review, and
- **grouping strategies** - facilitating children to work with "like minds" and encouraging group interaction (see separate notes on ability grouping).

#### References

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