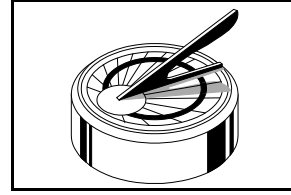


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programs such as No Child Left Behind and severe local school budget cuts, the gifted field is surviving and in many cases, successfully rising to these and other challenges. The Internet has provided a national and state forum for addressing serious issues in the field ranging from how to convince school officials that a child is gifted to how to implement effective acceleration procedures. These types of discussions on the Internet have helped to unify parents and teachers in their search for the most appropriate education for their gifted children. Web sites such as the Davidson Institute site are providing parents with crucial information about the quality and scope of gifted education programs in every state. Listserv groups such as those hosted by the Ohio and Pennsylvania gifted associations and the American Psychological Association discuss current issues and give participants the opportunity to obtain much needed information about programs and resources. Almost every state and national gifted association has a web site that provides useful information, e.g., summer programs for gifted students and summer training institutes for teachers. Specialized centers and schools at Johns Hopkins, Stanford and Northwestern universities offer web sites that give parents and teachers needed information about mathematics and science programs for the gifted. All of these and many other resources on the Internet have helped the gifted field to survive in these hard times.

Three articles in this issue provide teachers and parents with information on the interaction between differentiation, multiple intelligences theory and acceleration. Heleen Wientjes and Rosie Tanner of the Netherlands discuss how differentiation techniques and MI theory can be combined to produce stimulating programs for both students and teachers. (This is one of the most informative articles we have published on this topic.) Both authors are currently located at the IVLOS Institute, Utrecht University. They are experienced teachers and workshop trainers. Lynn Toney, a teacher of the gifted in Boaz, Alabama, has summarized a wide range of differentiation methods. She argues that there is “no contradiction between effective standards-based instruction and differentiation.” (p. 7) Elizabeth Chapman completes this gestalt of gifted education methods by discussing her experiences with being accelerated in elementary and high schools. Her article was motivated by the recent report on acceleration, **A Nation Deceived** (2005). Chapman began college during her junior year in high school when she enrolled concurrently in the Texas Academy for Leadership in the Humanities (TALH) and Lamar University. She is currently an undergraduate at Texas A&M University and plans to obtain her doctorate in gifted education. The concluding essay by Michael Walters discusses the work and giftedness of Robert Penn Warren, master of American literature. This year is the centennial of his birth in 1905.

During the 2004-05 school year, there has been a significant turnaround in the progress of gifted education, primarily stimulated by dynamic forces on the Internet. Despite destructive effects from federal

Maurice D. Fisher, Ph.D. Publisher

Compacting, Enrichment and Multiple Intelligences Theory in Gifted Education: A Dutch Example

**By Heleen Wientjes and Rosie Tanner IVLOS Institute of Education
(Institute for Teacher Training, Educational Development and Study Skills)
Utrecht University The Netherlands**

Introduction

The Netherlands is a north European country, with a population of approximately 16.5 million. There are almost 1 million children aged twelve to eighteen who spend an important part of their life in school. About 80,000 of these learners are intelligent or very intelligent. We believe that many of them could benefit from more challenging school tasks. Our work as in-service teacher educators at the IVLOS Institute of Education, Utrecht University, focuses on the teachers of gifted learners.

Overview

In this article we outline some historical developments related to gifted education in the Netherlands since 1980. Secondly, we focus on two topics: the theory and practice of enrichment tasks and multiple intelligences theory and some of its applications to gifted education. Finally, we conclude with some examples of good practice which demonstrate how both approaches can reinforce each other to benefit gifted learners and their teachers.

The Dutch Education System and Gifted Education

Most Dutch children start school at age four – although school is only compulsory from age five – and attend primary school until they are twelve. Parents usually select a neighborhood school or a school related to their own religious denomination, but the culture of the school is the most important factor: a school that provides a homelike and safe surrounding for their child. The primary school curriculum and objectives are the same for nearly all schools, and children are not streamed; the curriculum consists of different subjects, all taught by one class teacher per year, such as Reading, Writing, Mathematics, History, Geography, Religion and Biology. Learning to be part of Dutch culture is also considered an important objective of primary education. For example, the celebration of Dutch customs and rituals such as Saint Nicolas (5 December), Christmas and birthdays are very important at school.

During the final year of primary school, children take a national test which measures individual cognitive ability. The aim of this test is placement for the next four to six years of secondary schooling. The children then attend a school according to their test results and their level of intelligence. More than 60% of children go to vocational schools which aim to prepare them for immediate employment after school. The children who obtain relatively high test scores are admitted to secondary schools which prepare them in six years for entrance to higher education, including university. There are some six hundred schools for this type of secondary education, varying from small schools with

about two hundred pupils to larger ones with well over a thousand. Gifted and extremely gifted children can be found in all primary schools, but most gifted learners attend a secondary school which prepares them for higher education.

Trends in Working with Gifted Children in the Netherlands

Serious attention has only been paid to gifted education in the Netherlands since about 1980. At that time, both the government and gifted children's parents started lobbying for adequate education for gifted learners. Professor Peter Span at Utrecht University and Professor Franz J. Mönks at Nijmegen University were funded to carry out research concerning the education of gifted children and to publish their findings. However, despite Span and Mönks' work, substantial attention was only paid to the issue of such education ten to fifteen years later. There are four main reasons for this slow development:

- Opposition from society: a common belief was that the lucky children who are gifted could and should look after themselves.
- Inadequate funding for projects or schools in the area of gifted education.
- Funding for special needs: in general, it was felt that the little funding which was available for special needs should be dedicated to less able children, rather than to gifted learners.
- The domination of egalitarian thinking: people believed that all learners should be treated the same.

Primary Schools

Nowadays, the issue of gifted education in primary schools is an important one, and about 10% of primary schools have special programs for more able learners. However, recent research has shown that the quality and quantity of these programs varies widely. They range from well-thought out learning programs throughout primary school, to sporadic extra-curricular activities on a free afternoon, supervised sometimes even by an obliging volunteer parent.

Secondary Schools

In secondary education the situation is similar. About a quarter of the six hundred secondary schools provide special programs for their gifted learners; however, again, the quality of such programs is varied and sometimes leaves a lot to be desired.

Teacher Education

In teacher education programs for both primary and secondary teachers, the topic of gifted education is not yet a mainstream

subject; in order to learn about it, teachers must follow in-service training courses after their initial training.

Four Strategies

After nearly twenty-five years of research, experimentation and development (and little funding), four discernible strategies have been found to work with gifted children in Dutch schools. These are compacting, broadening, deepening and enrichment, each of which is briefly described below.

- Compacting: the reduction of the official curriculum to its most essential elements;
- Broadening: the study of subjects outside the regular, official curriculum;
- Deepening: the provision of more difficult tasks;
- Enrichment: the provision of more difficult tasks, which include elements of self-directed learning, meta-cognition, a challenging level of difficulty and projects or tasks which cover a number of subjects at the same time.

Other Strategies

Skipping a Class

Skipping a class is when a learner moves an extra year up through the school, from the end of group 5, for example, to the start of group 7, thus overtaking group 6. This is not a preferred strategy for gifted children, since in the first place cognitive development does not always go hand-in-hand with social development: children are not always happy socially or emotionally in a class with children older than they are. Secondly, and perhaps more importantly, just doing more work a year earlier is not challenging enough for gifted learners. In primary education, children very occasionally skip a class; during secondary school this hardly ever occurs.

Attending Secondary School or University Early

Recently, gifted children from the highest year of primary schools have been invited to study for a few hours a week at some secondary schools. In this way, gifted learners are introduced to new subjects, or offered a more advanced approach to their own, regular subjects. Similar cooperation is developing at some universities for learners in the top secondary school class.

Here we conclude our 'the state of the art' sketch of gifted education in the Netherlands. Below, we elaborate on approaches to and the rationale behind compacting, enrichment and the application of MI theory to working with gifted learners and their teachers.

Compacting and Enrichment

Span (1995) discerned how the approaches and ideas of Reiss and Renzulli (1992) could be applied to working with gifted learners, and therefore he applied and adapted them to the Dutch context. His work was partly carried out on the job – working

with schools, teachers and learners – experimenting, evaluating and adjusting. At a later date, Span also collaborated with our Institute of Education (IVLOS) at Utrecht University.

Nowadays, an elaborate system of in-service training for teachers of gifted learners, focusing on compacting and enrichment, is being implemented. The core belief behind these ideas is that all learners must stretch themselves at school: this includes absolutely every child, from the less able to the most able. Or, as Vygotsky says, learners should be continually reaching and working at their zone of proximal development, or ZPD. Schools should provide challenges for learners to do this. Span's important contribution has been to emphasize that schools already challenge the 'average' learner enough, but that the education system fails to challenge gifted learners. Span's tenet is that learners who score exclusively As and Bs are mentally undernourished, which results in boredom at best, or completely dropping out of the education system at worst.

Compacting

The first step in working with gifted learners involves compacting. This means that redundant or repetitive parts of the curriculum are omitted in order to save time; gifted learners then do more challenging extra work, related to their own abilities, in that extra time. Even when compacting is the only strategy used by a school, learners' motivation for and pleasure in school improves, since boring repetition and slow progress disappear. Compacting procures time which, in turn, can be devoted to the execution of challenging enrichment tasks. Experience proves that from 40% to 60% of time can be saved, depending on the subject and the complexity of the course book being used. At the start of our in-service training program, teachers learn to plan a 'compacting scheme' for their learners for the following three months. At first, they are often very cautious; if they plan to save 25% of time, they consider themselves very brave! However, these teachers very soon discover that their gifted pupils are perfectly able to indicate themselves which parts of the subject matter and exercises they consider redundant, and that they can actually work much faster than their teachers estimate.

Enrichment

During the extra time gained, gifted learners work on 'enrichment tasks.' These are open-ended tasks which always include an element of deepening and can include an element of broadening. Depending on the capabilities and experience of the learners and their teachers, enrichment tasks can take ten to thirty hours. The teacher's challenge here is to stimulate and facilitate learners to work systematically throughout. If executed effectively, enrichment tasks appeal to the following characteristics of able learners:

- Intelligence: learners can carry out in-depth tasks or research, according to their age and cognitive ability.
- Ability to use analogous thinking: for example, learners can approach a topic from different points of view (e.g. through

different school subjects), and can compare, connect or invent.

- Preference for self-directed learning: for example, learners can propose an approach themselves for tackling a task.

Examples of Enrichment Tasks

Here are eight short descriptions of effective enrichment tasks which have been carried out by students in Dutch schools:

- Conducted research into traffic jams in their local area and proposed a solution.
- Looked at and compared ways of communication between parents and children across different generations (interviewing grandparents, parents and their own peers) and across cultures (interviewing their Turkish classmates and their parents).
- Designed a piece of art for a wall in a school building, based on mathematical principles.
- Planned a trip to France and Great Britain following in the footsteps of Claude Monet.
- Compared different explanations of the purposes of Stonehenge.
- Studied genetic laws governing tongue rolling.
- Investigated different fitness programs and compared their claims.
- Explored the history of important families in their home town.

The Role of the Teacher: 'Teaching Kills Learning'

Gifted learners attain the highest levels of understanding when they work on challenging tasks and when they are self-directed. Teachers have an important role in facilitating this process, and in designing and carrying out a compacting and enrichment program. Their role is not that of 'the sage on the stage' who initiates, monitors and evaluates the learning process. Rather, the teacher plays many roles while learners carry out enrichment tasks; for example, that of sparring partner, older colleague, mentor or facilitator. One important role is that of coach, when the teacher discusses work-in-progress with groups of learners (most of the time, three groups) at crucial moments. These moments might be, for instance when students are:

- deciding on a research topic;
- formulating research questions;
- deciding on a research methodology;
- planning a task;
- carrying out of the task;
- drawing conclusions.

Often, enrichment tasks mirror small scale scientific research projects, where the researchers are twelve years old, carrying out research at their own level of cognitive development. The teacher needs to monitor whether the learners are taking it easy or being stretched. He or she must be able to challenge learners

by asking, for example, 'How could you explain these findings?' or 'What do you think about these contradictions in your findings?' Another important role is that of observer: the teacher must know the learners well and be able to observe how they are working. He or she must, therefore, ensure that the task is at the right level, and be able to readjust it if necessary.

Teacher Expertise

The facilitating teachers need to be experts in their own subject and its relevant research methodology. They need to follow their learners' progress 'bi-focally,' keeping one eye on the learner's progress, and the other eye on their own knowledge. Their expertise rests in defining what the next step might be for the learners in expanding their knowledge and skills; and how to 'guide' learners to that next step, to challenge them at their zone of proximal development. They need to know when and how to challenge, when to motivate or to praise.

Success and Flow

An enrichment task can be considered a success for both parties if gifted learners state that: (a) the project was difficult, (b) they have learned to do new things, (c) they have acquired new knowledge, and (d) they enjoyed it. Learners and teachers have related their experience in terms that remind us of how Csikszentmihalyi (1990) describes 'Flow' experiences. During a Flow experience, people report feeling immersed and concentrated during their task; they forget the passing of time, do not consider the difficulty of the task but work in a kind of enjoyable haze. In fact, we are convinced that learners carrying out enrichment tasks at their ZPD can and do experience Flow. It means hard work, pure pleasure, sometimes despair, and great satisfaction in this way of learning and teaching. It is like real life.

Even more pleasure can be created when teachers make use of the insights of Howard Gardner. The following section of our article discusses how implementing Gardner's MI theory has expanded, deepened and improved the design of enrichment tasks for learners.

Multiple Intelligences (MI) Theory: Overview of the Eight Intelligences

For those readers who need a reminder, here is a brief introduction to multiple intelligences theory. Howard Gardner posits that we all have at least eight different intelligences as described below.

Verbal-Linguistic. Oral and written language are symbols to think in and express this intelligence. Those strong in this intelligence enjoy reading, writing, speaking and listening. Some forms this intelligence takes include telling jokes, discussing, writing poems and passing notes.

Logical/Mathematical. Numbers and symbols representing

relationships express this intelligence. Those strong in the logical/mathematical intelligence enjoy solving problems, quantifying outcomes, and determining relationships such as cause-effect and if-then. Some forms this intelligence takes include creating, thinking about and solving problems, analyzing objects and situations for their components, using abstract symbols, and discovering and using logical sequences. **Visual/Spatial.** We think in and express this intelligence through pictures, sculpture, arranging objects and navigating through space. Those strong in the visual/spatial intelligence enjoy doodling, designing, drawing, combining colors, arranging objects and often have a good sense of direction. Some forms this intelligence takes include map interpreting and making, decorating, page layout and design, and making collages.

Musical/Rhythmic. Melodies and rhythms can be symbols to think in and express this intelligence. Those strong in the musical/rhythmic intelligence enjoy listening to and creating music in many forms. Some forms this intelligence takes include playing instruments, singing songs, reading, music, composing melodies and lyrics, and appreciating music.

Naturalist. Those strong in the naturalist intelligence enjoy collecting, analyzing, studying and caring for plants, animals and environments. They are sensitive to interdependence within plant/animal ecologies, and to environmental issues.

Interpersonal. Those strong in the interpersonal intelligence enjoy working with, caring for, and learning with others. Some forms this intelligence takes include leadership skills, friendship skills, and ability to understand points of view different from one's own.

Intrapersonal. Dream images and feelings are symbols to think in and express this intelligence. Those strong in intrapersonal intelligence enjoy solitude, contemplation, and an opportunity to explore inner states and thoughts including preferences, plans, fantasies, memories and feelings.

Bodily/Kinesthetic. Facial and hand gestures and movements are symbols to think in and express this intelligence. Those strong in the bodily/kinesthetic intelligence enjoy physical activities, hands-on activities, acting and developing physical skills. (Drawn from definitions in Kagan and Kagan 1998)

MI in The Dutch Education System

The Dutch education system (in the curriculum and examination areas) – like many education systems around the world – is fundamentally based on the logical-mathematical and linguistic intelligences; these are, of course, the intelligences in which many gifted children excel. There are some salient exceptions, for example, the relatively new secondary school subject, Culture and Art Appreciation, which encourages talented work in many different intelligence areas.

MI and Giftedness in Practice

We believe that working with multiple intelligences theory is a fruitful way of educating both gifted learners and their teachers. Through introducing MI to teachers during in-service training and working with them (for instance, in creating more multifaceted tasks for their learners, and appealing to a wider range of intelligences), we have encouraged teachers to challenge and motivate their learners. Below, we suggest four different aspects of putting MI theory into practice related to giftedness as follows:

- The development of gifted learners can be broadened, if they are offered challenges beyond the 'safe' linguistic and logical-mathematical intelligence areas.
- The understanding of gifted learners can be deepened by applying other intelligences.
- Through MI, teachers can learn to generate tasks to deepen and broaden the talents of gifted children.
- MI is a tool for understanding the self and others, and can help gifted learners to become more self-directed.

MI and Enrichment Tasks

A description of each application is described below, together with practical examples from our work with gifted learners and their teachers in school contexts in the Netherlands.

The development of gifted learners can be broadened, if they are offered challenges beyond the 'safe' linguistic and logical-mathematical intelligence areas. Many gifted learners are particularly gifted in the linguistic and logical-mathematical intelligences and can benefit from being stretched in other ways. To illustrate this, an Art and a Mathematics teacher worked together to design a task in which learners planned and actually painted a wall painting in their school; they used mathematical theory for their design. The teachers thus challenged the gifted learners through their visual and bodily/kinesthetic intelligences.

The understanding of gifted learners can be deepened by applying other intelligences. A Chemistry teacher gave some learners the task of creating a dance to represent the movements within a cell, based on what they knew about the forces which play a role in a cell. In this way, their (logical-mathematical) knowledge was reinforced through the application of the bodily-kinesthetic intelligence.

Through MI, teachers can learn to generate tasks to deepen and broaden the talents of gifted children. MI can help teachers to create more accessible and rich classroom materials, where they can personalize or differentiate materials for gifted learners. Secondary school teachers, working with gifted students, were introduced to the idea of MI and encouraged to include more intelligences in their work. One example is that of a team of secondary school teachers who created a project around the topic of Pompeii for their 15-year-old learners, where pupils chose from a number of tasks to demonstrate their

understanding of the topic. The tasks were designed to appeal to a number of intelligences. We describe seven here:

Example 1 (interpersonal, linguistic, visual/spatial)

You are a junior theatre team. You are going to perform a play about Alexander the Great in the large theatre in Pompeii. Use the mosaic of the Battle of Issos mosaic for inspiration.

- Perform a number of scenes from your play about Alexander which the citizens of Pompeii would appreciate.
- Design a program for your audience.

Example 2 (interpersonal, logical/mathematical, linguistic)

You are a group of Math whiz kids who like developing computer games. You would like to develop a game based on the rectangular figure found in the House of the Geometric Figure. This figure is in the shape of a game board with a playing field of ten squares. Develop and write down the rules for a chess game with a board of only twenty squares, and demonstrate the game to the group.

Example 3 (interpersonal, visual/spatial, bodily/kinesthetic)

You are a group of young sportsmen and women. Create and give a demonstration of a number of gladiatorial fighting moves and sports as they were known in Pompeii in A.D. 79.

Example 4 (logical/mathematical, bodily/kinesthetic, visual, linguistic)

You are a team of designers who are researching the effects of the poisonous gasses emitted from Mount Etna. Design and give a presentation about a gas mask which might have been used in A.D. 79 to protect the inhabitants of Pompeii from poisonous gas.

Example 5 (linguistic, logical/mathematical, interpersonal, intrapersonal)

You are a group of philosophers living in the 1st century A.D. Hold a philosophical debate as the Italian philosophers might have done in the time of Pompeii, about their reactions to the disaster.

Example 6 (visual/spatial, bodily kinesthetic, interpersonal, naturalist)

You are geologists working on the way lava emerges from a volcano. Design and make a model for a safe escape route for the inhabitants of Pompeii.

Example 7 (interpersonal, naturalist, visual/spatial, linguistic)

You are a group of young, enthusiastic ornithologists and naturalists who are observing birds near the River Sarno. Using the evidence from the Pompeii mosaics and frescos as a source of information, reconstruct the ecosystem of the area in the year A.D. 79.

For each task, the teacher also provided relevant websites and designed prompt questions to help learners in their thinking. For

instance, “What do the kinds of birds and animals in the Pompeii mosaics tell us about the landscape?” (Example 7)

MI is a tool for understanding the self and others, and can also, we believe, help gifted learners to become more independent. Through finding out more about themselves and their intelligences, the theory “allows users to view themselves and others differently, often from deeper, multiple perspectives” (Wilson 1998). If gifted learners are more aware of the ways in which they can learn and tackle problems, this can lead to more learner independence. Furthermore, their teachers can gain more insight into their own ways of teaching and developing materials.

As a first step, gifted children and their teachers can benefit from making their own MI profile. We have worked with teachers in workshops where they have taken quick interactive Internet or paper-and-pencil tests to discover their own MI profile. We request that they complete at least two tests which usually result in two slightly different profiles. We encourage teachers to be skeptical about the test results (the tests are, after all, themselves); they then decide themselves which profile most matches with their own self-image. The purpose of this activity is for consciousness raising. Teachers become aware of their own stronger or weaker intelligences. For many teachers, this activity is a real eye-opener, since it provides interesting insights into the way they teach.

One French teacher found that she was extremely talented in two particular intelligences: the logical/mathematical and the intrapersonal. She found that this discovery helped her to realize why she could not help some of her learners who are intelligent in different ways from her. She decided to try to use the blackboard more, to develop materials that stimulate the visual channels of her learners, and to use more music in her lessons.

Gifted learners can also be encouraged to discover their own intelligence profiles. This is primarily a consciousness raising activity and it is our experience that secondary school learners like to discover new aspects of themselves. They can then be introduced to tasks or learning strategies to improve their ‘weaker’ intelligences, or be encouraged to think with the teacher about ways of learning which might suit their intelligence profiles. This can result in more aware, independent learning. In fact, the learners working on the Pompeii project took an MI test before they chose their own specific tasks. The teacher compared the learners’ eventual choice of task with their MI profiles. Most of the learners chose tasks strongly related to their profile, but without being prompted to do so a few of them chose a project that was in their weaker MI area. They said they found it interesting to see how they would cope.

Conclusion

In this article, we have shown that through using the method of Compacting and Enrichment, and through combining this with

applications of multiple intelligences theory, the knowledge and capabilities of gifted learners can be stretched and challenged. We believe, in addition, that the incorporation of MI elements into enrichment tasks increases the motivation and enjoyment of learners and teachers, as well as their learning: both teachers who are designing tasks and their learners expand their repertoires. The motivation of both parties thus increases. We look forward to hearing from other readers of *Gifted Education Press Quarterly* about your experiences in this field and particularly about further effective applications of MI to working with the gifted.

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Differentiation versus Standards-Based Instruction By Lynn Toney

Boaz City School System Boaz, Alabama

Standards versus Differentiation

There is no contradiction between effective standards-based instruction and differentiation. Curriculum tells us *what* to teach. Differentiation tells us *how*. Whenever a standards-based curriculum is taught, differentiation provides the means to enrich the curriculum and harness the skills and creativity of today's gifted learner. Differentiation is teaching the same standard to a range of learners by employing a wide variety of teaching and learning modes (Tomlinson, 1995).

Teachers differentiate curriculum through content, process, and product. *Content* differentiation means giving the students different materials to cover. For instance, a student has already read *Roll of Thunder, Hear My Cry* (Mildred Taylor, 1976). Instead of having the student reread it with the class, an option might be to assign *I Know Why the Caged Bird Sings* (Maya Angelou, 1970). A common differentiation of *process* is curriculum compacting, which means paring the curriculum to the essentials so that gifted and talented students may move quickly through the material, test out, and go on to more aptitude appropriate material (Reis, Burns, & Renzulli, 1992). *Product* differentiation occurs when we allow students to demonstrate

their learning through different assessment formats. For example, students could show their understanding of *Romeo and Juliet* by modernizing the script, acting out a scene, or creating musical accompaniment for the play's important scenes (Tomlinson, 1999).

Characteristics of a Differentiated Class

According to Tomlinson (1999) an effective differentiated classroom will exhibit at least one of the four following characteristics:

- **Instruction is concept focused and principle driven.** All students have the opportunity to explore and apply the key concepts of the subject being studied, and to come to understand the key principles on which the study is based. This type of instruction stresses understanding and sense making rather than retention and regurgitation of fragmented bits of information. Concept-based and principle-driven instruction invite teachers to provide varied learning options. One of my classroom favorites is retelling a story by using pantomime.
- **On-going assessment of student readiness and growth are**

built into the curriculum. Teachers do not assume that all students need a given task or segment of study, but continuously assess student readiness and interest, providing support when students need additional instruction and guidance, and extending exploration when indications are that a student or group is ready to move ahead.

- **Flexible grouping is consistently used.** In a differentiated class, students work in many patterns. Sometimes they work alone, in pairs, and in groups. Sometimes tasks are readiness-based, interest-based, constructed to match learning style, and a combination of readiness, interest, and learning style. In a differentiated classroom, whole group instruction may also be used for introducing new ideas, when planning, and for sharing learning outcomes.

- **Students are active explorers.** Teachers guide the exploration. Because varied activities often occur simultaneously in a differentiated classroom. The teacher works more as a guide or facilitator of learning than as a dispenser of information. As in a large family, students must learn to be responsible for their own work. Not only does such student-centeredness give them more ownership of their learning, but it also facilitates the important adolescent learning goal of growing independence in thought, planning and evaluation. Implicit in such instruction are: (1) goal-setting shared by teacher and student based on readiness, interest, and learning profile; and (2) assessment predicated on student growth and goal attainment.

Differentiating Strategies

Differentiating instruction improves the quality of learning for all learners, but especially for gifted students. However, the strategies mentioned in this article do not need to be used as a total package, as a generic one-size-fits-all solution to differentiation. Regular education classroom teachers need to use them in ways that suitably benefit their students and programs (Troxclair, 2000). Some of the more popular strategies are curriculum compacting, flexible grouping, product choices, tiered assignments, stations (also known as centers), independent projects, academic competition, mentoring, and modifying the environment. It has been my experience that stations work well with both the struggling students and the high end learners.

Curriculum Compacting

This involves streamlining what is taught to students by first assessing their prior knowledge and then modifying or eliminating work that has been partially or fully mastered. It is a powerful strategy for ensuring accountability for standards while acknowledging what students already know (Reis & Renzulli, 1992).

Flexible Grouping

The teacher will group students according to strength, need, or interest, and groups change frequently, sometimes in the course

of a single class session. This is particularly effective when students' achievement levels differ in content and skills (Gregory & Chapman, 2002).

Product Choices

Giving students the choice of what kind of product they will produce is a strategy that students love. For example, one group might complete a written script; another, a videotaped dramatization of the same; and a third, a comic strip. In this way, each group addresses the same content standard but uses a different skill or arts standard (Renzulli, 1992).

Tiered Assignments

The entire class studies the same content, but individual students choose assignments at different levels of complexity, with the teacher's assistance. There are three levels: basic, average and advanced (Renzulli, 1992).

Stations

Using stations involves setting up different areas in the classroom where students work on various tasks simultaneously. These stations invite flexible grouping because not all students need to go to all stations all of the time (Tomlinson, 1999).

Independent Projects

Teachers tend to find that many gifted and talented students usually have a lot of extra time on their hands in the classroom because they finish their work rather quickly. This is time that could be used to help them develop their creativity by allowing them to explore a special area of interest related to the topic being studied (Tomlinson, 1999).

Academic Competition

These are highly motivating events that can be held right at your own school and have relatively inexpensive registration fees. They are computer driven and test students' knowledge in a variety of academic disciplines. Not only do they challenge them academically, they provide an opportunity to develop skills in leadership and group dynamics (Willard-Holt, 1994).

Mentoring

Although gifted students are often used as tutors or teacher aides, we should instead find someone willing to mentor them in an area of their interest. Start with the parents of students at your school; ask other teachers and contact local organizations to find mentors willing to work with gifted students. The bottom line is that you want to help the gifted student reach his/her potential, and tapping outside expertise is sometimes necessary. Gifted students need tutors too (Miller & Willard-Holt, 2000)!

Modifying the Environment

Instructional strategies must be differentiated but so must the environment of the classroom. Gifted students learn best in a receptive, nonjudgmental, student-centered environment that encourages inquiry and independence, includes a wide variety of materials, provides some physical movement, is generally complex, and connects the school experience with the greater world (Troclair, 2000).

Conclusion

Teachers moving toward effective differentiated instructional classrooms find greater success if they: “(1) have a clear rationale for differentiation, (2) prepare students and parents for a differentiated classroom, (3) attend to issues of classroom structure and management as they move toward more student-centered learning, (4) move toward differentiation at a pace comfortable to both teacher and learners, and (5) plan with team members and other colleagues interested in differentiation” (Tomlinson, 1999).

There are many differential strategies that can be used in the classroom. Effective teachers will figure out which ones work best not only for themselves, but for the needs of their students as well.

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“All those students are in the class: Now you ask me how should I best teach them? Should I teach them from the point of view of the history of science, from the applications? My theory is that the best way to teach is to have no philosophy, [it] is to be chaotic and [to] confuse it in the sense that you use every possible way of doing it. That's the only way I can see to answer it,. . . I really don't know how to do it. I don't know how to answer this question of different kinds of minds with different kinds of interests – what hooks them on, what makes them interested, how you direct them to become interested. . . .” From **The Pleasure of Finding Things Out** (1999, p. 20) by Richard Feynman, 1918-88 (Nobel Prize Winner in Physics). He was one of the greatest teachers of modern quantum physics.

A Former GT Student Discusses Her Experiences with Acceleration, and Comments on A Nation Deceived (2005)

**By Elizabeth Chapman
Texas A&M University College Station, Texas**

If you had asked me my take on acceleration twelve years ago, I would have shuddered. I can recall, at the tender age of six, my mother explaining to me that since I was reading faster than the rest of my classmates in kindergarten, I would try out first grade in the afternoons and see if I wouldn't rather be in that class.

“Sounds good,” I said, cutting up a paper plate for an extremely important invention.

“Now if you don't like it,” my mom continued, “you don't have to keep going. We're just going to try this out.”

“No, I want to,” I said, holding the glue bottle with both hands two feet over the plate, giving it a good, hard squeeze. It was nice that my kindergarten teacher and the other students were impressed with me, but if I could read chapter books in the first grade class, I was willing to make an exchange.

“Well, it’s your decision,” Mom said and put her hand on my head.

“Yes,” I glowered, and threw a handful of yarn bits on top of my masterpiece with emphasis. “It’s *my* decision and I want to go.”

A few days later, after lunch, it was time for my big debut. I had my pencils and my backpack all ready to go. With an air of sophistication seen only in students of the upper grades, I walked down the hall and into the first grade classroom. There she was: an eight-foot tall komodo dragon with a blonde ponytail. My first-grade teacher. She handed me a reading assignment and showed me to my seat. I continued to watch her out of the corner of my eye. A boy approached her desk with a worksheet. She bared her fangs at him and told him to redo it. I looked down at my assignment to read the instructions and couldn’t make them out; I had forgotten how to read.

Needless to say, I didn’t get far in that class. A decade later, during my sophomore year in high school, after receiving admission to start at Lamar University the next year through the Texas Academy for Leadership in the Humanities (TALH), I was still a bit wary about grade-skipping. “Well,” my mom said, “if you don’t like it, you don’t have to keep going.” “Okay,” I gulped.

As it turned out, I did keep going to the Academy because they did acceleration *the right way*. My experiences with gifted and talented programming and acceleration at TALH and at my intermediate school, the Webster Academy for Visions in Education, were so good in fact that I decided to become a GT educator myself. I look forward to joining the ranks of the hard working crusaders who strive to make learning a joy again for the nation’s brightest (as well as learning what’s *really* in the teachers’ lounge). Yet in my last remaining year as an outsider to the world of GT professionalism, I’d like to put forward a student’s perspective on acceleration programming. I recently read the authoritative report on acceleration, *A Nation Deceived: How Schools Hold Back America’s Brightest Students* (2005), and while I’m thrilled to see this issue addressed on a national level, in such a concise and objective manner, I have a few ideas that I think would make the report’s recommendations more effective. So speaking for the last time from one of the small desks, I offer my thanks for the wonderful job that you all have done and a few suggestions that might help out our future students.

Grade-Skipping Acceleration Programming Needs to Occur Simultaneously with Gifted Programming

While skipping a grade (or several) may be a big improvement for a student who is bored in regular class, it’s simply not enough. Moving a gifted sixth-grade student from a boring sixth-

grade class into a boring seventh-grade class won’t do much more than cut down on the amount of time that student has to spend in a boring school. GT students in this situation are likely to catch up with their new peers very quickly, and when they do, the worksheets and the standardized test practice sessions won’t have gotten any more interesting.

I’ve heard many different definitions for the label “gifted and talented” while growing up, but there seems to be a general consensus that being GT isn’t just about being academically advanced, it’s about being academically advanced and thinking differently. It’s not just understanding the content of a classroom, but understanding it and *doing something with it*. It’s about saying “Will my plant get fat if I feed it more carbon dioxide?” or “Would the Roman Empire still have fallen if it remained a republic?” or “What are we going to do when there’s no more oil left?” And students with these questions are just as likely to get shut down by a teacher with a standardized test-based agenda in seventh grade as they are in sixth.

That’s why it’s essential that gifted students be given an advanced curriculum as well as the freedom to explore that curriculum in creative ways. To do that, they cannot be simply placed in the next grade level up, where many students need a more structured, test-based education – they need a classroom with a teacher who is willing to indulge their questions about how a history lesson might relate to the war today, who will let them make a film to demonstrate their comprehension instead of filling out a Scan-Tron answer sheet.

Additionally, some important social and emotional issues come into play when accelerating students by grade-skipping. While in my observation, the authors of *A Nation Deceived* are correct in stating that accelerated students’ social experiences are “much more positive than negative,” (page 7) there are some factors that cannot be accounted for simply by relying on a student’s maturity. This problem manifests itself most clearly when the grade-skipping involves attending a college or university. The impact that being several years younger than one’s classmates in college goes way beyond “not being of legal driving age” (page 36); dating, drinking and attending parties are all activities somewhat integral to college life in which a fifteen year-old cannot legally participate in with her older peers. While an accelerated student may be able to carry on a stimulating conversation with her fellow classmates, it is unreasonable to expect that student to participate fully in college social life without compromising herself.

This is not to say that acceleration at the university level is a bad idea. My two years at Lamar University were some of the most rewarding, academically and socially, of my K-12 education – because I was grouped with other high-ability students closer to my age. The combination of a challenging academic environment alongside a supportive social environment is the real recipe for gifted students’ success, and I personally wouldn’t recommend it any other way.

Acceleration to the College Level Needs to Take Place at the Best Universities in the Nation

A few months before I was supposed to leave for TALH, I tried to persuade some high school friends to come with me.

“Absolutely not,” one said to me. “College is supposed to be the best four years of your life – why do you want to rush through it? You’ll miss out on the real experience.”

I asked another. “But it’s at a *public* school.” she pointed out politely. “I’d rather just wait for Harvard.”

“Do they have a medieval literature program?” one asked hopefully. “I’d leave high school in a second if I could specialize in medieval literature.”

“You can check,” I said, “but probably not.”

Needless to say I embarked upon my college experience solo. And looking back, I wouldn’t trade my two years at Lamar University for anything, but my friends did bring up good points. There are plenty of GT students who are bored to tears by their high school, who dream of the day when they can enter a university. But depending upon the early entrance options available to them, some of the brightest might decide to wait it out at their local high school.

Often the smartest high school students are also the most ambitious. From an early age they’ve locked on to the idea of an Ivy League, or a massive research institution, or a prestigious liberal arts college. So when they’re given the option to take classes at a local community college or a small state university, it’s not surprising that many of them turn the offer down. Remember that these institutions are not geared towards the bright students who aren’t getting what they need at high school. They might find that the courses that are offered are a step or two above what they had in high school, but are a far cry from the challenges they had anticipated. And even though transferring to another university after a year or two is a great option, students should be wary about how well the course work will prepare them for upper-level courses at their second university. Discovering that you don’t *really* know how to write a paper is not an ideal situation in a senior level *Intellectual History of the 19th Century* seminar.

But there’s more to college than school work. “The Freshman Experience” – football games, and class traditions are all a big part of college life that a lot of students don’t want to miss out on. Other students might look upon these with the same interest that they regard athletic socks (I’m part of that group). But internships, undergraduate research experiences, conferences, study abroad programs and extracurricular activities are all harder to come by at small, local schools than they are at the schools that bright students would normally choose to go to.

The solution is to offer more accelerated programs for younger students at the universities to which they would normally apply. Classes at these universities would offer advanced course work that would truly be challenging, and there would be less need to

transfer after a few years, thereby letting students conduct their studies without interruption. Universities that offered these kinds of programs would win out not only by attracting some of the brightest minds in the country to enhance their academic reputation, but by garnering an impressive alumni list ten to twenty years down the road.

Acceleration Advocacy (and Legislation) Must Take Place at the National Level

I was browsing gifted and talented websites when I came across a summary of how well each state measures up in providing GT education. Much to my amazement, Texas was one of the leaders in gifted legislation and funding.* I have to say, with all due respect to my home state, that if the GT education status quo in Texas is the best we can do, then this nation is in big trouble. I have few complaints about my own education; with a bit of luck and research, the programs I attended were always quite good. But my experience was far from the norm, as I learned when I met the other students at TALH who had left their local high schools.

*(<http://www.geniusdenied.com/StatePolicy.aspx>)

The point is that while the quality of gifted programming, legislation and funding fluctuates much more than it should across Texas, the national trend seems to be non-existence rather than variation. Acceleration opportunities may be weak or even unavailable in other parts of the country.

To combat this problem, there needs to be a strong, centralized movement for gifted rights at the national level. This has some practical rationale (it would make it easier for a student to go to an early-start university program out of state) as well as some more philosophical foundations. (Every child deserves the opportunity to learn, regardless of where they live.)

The time is especially appropriate right now to lobby for this kind of change. We’ve all heard about how the War on Terror is straining the American supply of troops. What hasn’t made the news is the sudden need for bright, motivated, *well-educated* young technocrats. Sources tell me (my sources being my friends at other universities) that the government has requested certain departments of key strategic interest at their schools – Arabic, for instance – to increase their enrollment so as to supply the U.S. with the resources it needs to win. Here at Texas A&M, rumors abound about increased CIA recruitment. But young internationalists aren’t the only ones in demand – we’re going to need engineers to work on alternative fuel sources, agriculturalists to deal with the world’s ever increasing population, lawyers to figure out how globalization is changing the way we legislate. This is not a good time to be holding the best and the brightest back.

We have national problems that require national solutions. The best investment that we can make in the future is equipping our

young people with the means to deal with those problems. If the U.S. legislature can't see this, it's in everyone's interest to open their eyes.

In Conclusion...

The topic of acceleration for the gifted and talented has been dealt with exhaustively by individuals who are older, more educated and more experienced than myself. What I've tried

to bring to the table is a student's recommendation about how to make the system better. And while a lot is being done to supply bright children with the kind of education they deserve, I believe that it's not enough to offer accelerated programming – you must offer *good* accelerated programming. The question our nation faces is not so much whether to implement more acceleration – the demands of our present world have answered that for us. The question is how to go about doing so. I look forward to working with educators in figuring that out.

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Tribute to Robert Penn Warren

By Michael E. Walters

Center for Study of the Humanities in the Schools

“Not only was the right to knowledge portrayed. There was an even more gross portrayal. The complacency fostered by the doctrine of common man-ism belied and portrayed that aspiration to excellence that is really in our midst, that has always marked much of our history, an aspiration that is sometimes blundering and confused, but is indomitable and indestructible. . . .” Robert Penn Warren, *Knowledge and the Image of Man* (from Robert Penn Warren: A Collection of Critical Essays, John Longley, Jr. (Editor), p. 240, NYU Press, 1965)

In April of 2005, the U.S. Postal Service issued a stamp to commemorate the centennial of Robert Penn Warren's birth (1905-89). While not as well known as F. Scott Fitzgerald or Ernest Hemingway, he had the distinction of receiving three Pulitzer Prizes – one in literature in 1947 and two in poetry in 1958 and 1979. His Pulitzer Prize novel, All the King's Men (1946), is about the dilemma of political power. The protagonist (Willie Stark) was based on the political life of the U.S. Senator and Governor from Louisiana, Huey Long (1893-1935). To this day there is a legendary aspect to Long's memory. He created a political coalition of poor whites and African Americans with his message, “Every man a king.” Warren took his political science to a metaphysical level – All the King's Men is a meditation on the problem of using power and its impact on history. In 1934 he was an assistant professor of English at Louisiana State University during Huey Long's governorship. In 1939 Warren received a Guggenheim Fellowship to study in Italy where he witnessed the fascist dictator, Benito Mussolini. These personal experiences stimulated his writing about the role of power in politics.

Warren's life was a continuous interaction with giftedness and its sensibility. His mother was a school teacher and his banker father was an amateur poet; his childhood home was infused with books. He originally wanted to attend the U.S. Naval Academy but an earlier accident resulted in the loss of an eye. In 1921 he entered Vanderbilt University in Nashville, Tennessee to major in electrical engineering. At that time, Vanderbilt was a breeding ground for scholars in literature and the humanities. The poets John Crowe Ransom, Andrew Lytle and Donald Davidson were Warren's instructors. Allen Tate, who became a great American poet, was his roommate. In 1930 he received an English literature degree from Oxford University where he was a Rhodes Scholar. Later, while on the faculty at Louisiana State University, he was an editor (1935-42) of the literary journal, the *Southern Review*; its contributors were such renowned poets as W.H. Auden, Wallace Stevens and T.S. Eliot. At LSU he worked with Cleanth Brooks who became a lifelong friend and colleague -- they wrote two major texts for college English courses, Understanding Poetry (1939) and Understanding Fiction (1943).

Warren was one of the foremost educators of his time – a professor at Vanderbilt, Louisiana State, Minnesota and Yale universities – and he was a distinguished lecturer at other universities throughout the United States. I attended his lectures at the University of Virginia in the late 1960s. Just before he died in 1989, my wife and I went to his poetry reading at the YMHA at 92nd Street in New York City. Afterward, despite his illness, he graciously talked to us about poetry and writing. For Robert Penn Warren, the sensibility of giftedness was a gift he loved to share. He indeed deserves not only a commemorative stamp but the deep appreciation of all Americans.