Using Maker's model to differentiate for diverse learners

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June Maker is recognised as having developed a model for differentiating curriculum for the gifted. For those who are gifted and also have additional forms of diversity (due to various forms of disabilities), it can be challenging to cater for the student's diverse learning needs while still covering the curriculum. How might a classroom teacher differentiate appropriately for a student with such diverse needs while meeting curriculum requirements? How might a parent advocate for a student's diverse learning needs to be met? This presentation examined how to differentiate for diverse learners in a manner that is appropriate to the individual student while also focusing on the types of diversity.

It is critical to consider the difference between equality and equity. When equality is prioritised, everyone receives the same – despite individual need. It seems obvious that individuals have specific needs that must be addressed if they are to achieve so equity (where individual needs must be accommodated) is a more just intervention.

Carol Ann Tomlinson maintains that differentiation means "Consistently using a variety of instructional approaches to modify content, process, and/or products in response to learning readiness and interest of academically diverse students." Differentiation makes a difference to the needs of gifted learners because 'one size does not fit all'. Gifted students require curriculum differentiation – which ideally includes differentiation of homework. School administrators and parents of gifted children expect teachers to implement differentiation for gifted children in the classroom. The difficulty lies in how busy teachers, with many demands upon their time, can differentiate the curriculum, ensure the gifted student's educational, intellectual and emotional needs are met and document the differentiation process while addressing the needs of other students and maintaining their sanity.

Mihaly Csíkszentmihályi and Lev Vygotsky demonstrate through their models that incremental learning progression means taking one step at a time. The Maker Model was developed to address the specific needs of gifted students by providing qualitatively different learning experiences through the integration of content, process and product modifications in specific learning environments. When using Maker's model, it isn't necessary to 'reinvent the wheel' and/or to make numerous changes (via differentiation) as usually one change at a time has a 'flow-on effect', creating – over time – an optimal environment for the gifted student. The Maker model recommends ways to structure and differentiate curriculum to enhance and extend the specific learning characteristics found among the gifted population.

Authors, Maker and Nielson, claim that for content to be more appropriate for gifted students it should be presented in a way that is more abstract, more complex, more varied and organised differently, using broad themes or concepts. Process the term used to explain the ways in which learners think, question and learn and the ways in which teachers teach them. The aim is to facilitate opportunities for gifted students to produce a product that reflects their potential. Often students create

products which approximate to some extent those developed by professionals. Carol Ann Tomlinson maintains that it is possible to differentiate curriculum through adjustments to content, process and product to reflect a student's readiness, interest and learning profile. When differentiation in one or more of these curriculum elements is introduced, it is necessary to also consider the learning environment in which the learning process takes place and where the product will be developed. A learning environment is related to the physical setting and emotional climate in which learning takes place. We can differentiate the learning environment which, according to Maker, should be those that enhance gifted students' characteristics; are preferred and are required for modifications that are appropriate for them.

When Maker's model is used, certain elements are altered to create a more beneficial learning structure for gifted students. Ideally, by responding to a gifted learner's readiness, there are beneficial student movements. The resource*, Make a Twist: Curriculum differentiation for gifted students,* uses Maker's model and was developed in response to: requests from primary and middle school teachers who felt unsure about how to select and implement appropriate curriculum differentiation strategies; concerns expressed by parents, frustrated at the lack of differentiation provided in schools, and gifted students' need for greater engagement and academic challenges.

Susan Baum, who specialises in teaching twice-exceptional students, together with co-authors, Robin Schader and Steven Owen, have written a book titled: *To be Gifted and Learning Disabled* and explained their approach thus: " … we painted a picture of twice-exceptional learners using the metaphor of "green" to underscore that it is the combination of high abilities and learning challenges that makes them not only unique individuals but also, as a group, different from successful mainstream students. Now we bring in the concept of neurodiversity, for … there are many, many shades of green."

Just as it is critical that Maker's model is used to differentiate for gifted students, it is equally important for students who are twice exceptional to have differentiation that incorporates accommodations for whatever their area of disability might be. It is not possible in this context to consider differentiation appropriate for every disability, but using two examples (dysgraphia & hearing impairment) might act as an impetus for differentiation for other disability areas to be considered.

Dysgraphia refers to a physical & neurological condition, but asynchrony may require similar support needs – where a gifted child's production of written material (because of fine-motor development) is appropriate for their chronological age but is relatively weaker than their intellectual ability and mental age. The student's written work does not match their oral expression or awareness of cognitive concepts on a high-level topic. Maker's model suggests differentiation in content (which should include high level concepts to cognitively engage the student) while simultaneously providing options for process to incorporate differentiation associated with the area of disability by using photographs, voice to text software, a mind map (perhaps electronic if required) to allow the student to learn, process and record with minimal (or no) writing required. Alternatively, additional time for exams, a debate or oral presentation (for the teacher, small group of students, class, staff meeting. or electronically recorded in a variety of ways might allow a 2e student to meet academic requirements while developing useful life-long presentation skills.

A student with a hearing impairment may have the disability supported by the use of hearing aids (including an FM system where there is profound hearing loss). Content might be differentiated with access to advanced (including University level) Physics classes (when appropriate) as well as the development of a glossary of words/terms/phrases used in Physics and the Learning Environment differentiated by providing opportunities for the 2e student to work within a Physics laboratory so there is an awareness of future career possibilities. Teachers might learn adjustment techniques (e.g., not standing in front of a window or source of light, facing the class & trimming a moustache to aid lip reading) but it is equally important to provide a sense of agency by involving a student in the development of information about this 2e student to be shared with teachers prior to school starting.

There are many ways in which Maker' model can be used to plan appropriate differentiation for 2e students.