Tailored Education Programs from Pre-K to K-12 and Beyond – Personal Reflections on Some Tested and Adaptable Practices from the US and Canada

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Abstract

In this paper, we review some of the best practices of tailored education in Canada and the U.S. from Pre-K to College/University. We discuss some of the approaches commonly used to nurture the minds of the gifted and talented students and make a case for developing the same for Ethiopian children through our personal reflections and account of personal experiences. As parents, students and educators who have benefited from tailored programs, we feel obligated to share those experiences and reflections so that education policy makers may adopt them to formulate specialized programs at different levels. Our objective is to contribute to an ongoing dialogue about launching and running specialized programs, schools, colleges/universities as well as courses for the gifted and talented children.

Keywords: Education, Education for the gifted and talented, K-12 and beyond, Pre-K, tent-based schools

Introduction

Every child is unique and needs a uniquely tailored educational program that allows him/her to succeed academically, socially, and financially -all paths to a rewarding life. However, most education programs are highly standardized (non-tailored) and unable to respond to the unique individual needs. While standard programs may work just fine in some cases, some students could benefit more from tailored/specialized arrangements. This is particularly true for the gifted and talented students and students with special needs. In this short article, we describe some of the best practices of tailored education programs in Canada and the US. In both countries, tailored/special education has been legislated and introduced at different times in different provinces, territories and states. For instance, while the US passed mandatory special education legislation in 1975, in Canada special education for exceptional students was made mandatory first in Nova Scotia in 1969 (revised in 1984) followed by Saskatchewan in 1971 (revised in 1979) and in Ontario (through a landmark piece of legislation called Education Amendment Act or Bill 82) in 1982 (McBride, 2013 & Hayward, 2004). Special education has become mandatory in both countries in the sense that school boards and departments are required to create and run programs for exceptional students.

While often it becomes obvious that a student is gifted and requires a special education, in many cases, it is not. Part of the reason rests on the fact that gifted kids often struggle in school, which can be surprising. After all, if a student is talented, should he/she not love school and do well in it? The fact is, sometimes giftedness or being talented comes intertwined with some behavioral issues (difficulty relating to and interacting with peers, struggling with some or many subjects in school, etc.) and due to lack of challenges and proper educational environment such traits become hard to detect (see Silverman, 2003; Davis & Rimm, 2004 for a detailed discussion).Some of the characters of the gifted and talented students that often help us identify them include using advanced words or language, having early reading skills, keen observation and curiosity, and good memories, understanding complex concepts, thinking beyond the obvious, sticking with complex tasks, challenging or questioning teachers, demonstrating special talent in music, art or drama (see Davis & Rimm , 2004; Mattews & Foster, 2009, among others for discussion). Note that a child does not need to exhibit all or even most of these traits to be gifted or talented.

In 1972 Sidney Marland, the then US Commissioner of Education, proposed the following definition for the gifted and talented: Gifted and talented children are those who are identified by professionally qualified people, as, by virtue of outstanding abilities, capable of high performance. These are children who require differentiated educational programs and/or services beyond those normally provided by the regular school program in order to realize their contribution to self and the society at large. Children capable of high performance include, singly

or in combination, those with demonstrated achievement and/or potential ability in one of the following areas: (i) general intellectual ability, (ii) specific academic aptitude, (iii) creative or productive thinking, (iv) leadership ability, (v) visual and performance art, and (vi) psychomotor ability (Tannenbaum, 2000; Renzulli, 2002, among others).

Although it is not clear when and how tailored educational programs were introduced in Ethiopia, such programs were long recognized in much more informal way. As parents, students and educators who have benefited from tailored programs for ourselves and families, we felt obligated to share those experiences so that policy makers can make use of them as inputs to formulate specialized education programs at all levels. As a methodology we adopt a descriptive qualitative approach (see Selltiz et al., 1976; Cohen et al., 2002; Best & Kahn, 2014, among others) to elucidate our ideas and describe best practices of tailored education programs from both the United States and Canada. The data was generated from both primary and secondary sources, recounting our experiences as a subject. Our hope is that this article will contribute to an ongoing dialogue about creating specialized schools, colleges or universities for gifted and talented children. It is important to note that our intention is not to provide policy prescription. It is rather to contribute to the ongoing discussion on this topic. We briefly cover experiences from pre-K to college/university.

Pre-school programs (Pre-K)[1]

Pre-Kindergarten (also called pre-K) is a classroom-based preschool program for children below the age of 5 in the US and Canada. The focus of the program is to support children to be able to adapt to their surroundings, to instill learning habits, and to develop physical, mental, and social skills. Pre-K is an early childhood education, which involves a lot more than just play and fun learning. It teaches the child basic education and fosters life skills through active and hands-on learning. It also instills in children positive self-esteem, love for learning and mutual respect as well as respect for others (see Hertberg-Davis & Callahan, 2013; Loveless et al., 2008; Park et al., 2007; Lubiniski et al., 2001; Westberg,1999, among others).

Children are the future of society, and it is very important that these young minds be nurtured so that they become responsible citizens of tomorrow. In this respect, pre-K or early childhood

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[1] Although the two notions are not synonymous, they do share certain traits: they both fall under the pre-primary program category, meaning they're intended to promote kindergarten readiness in young children. In many cases, both pre-K and preschool curriculums involve the importance of play, discovery and hands-on activities to embolden learning. Each may promote a safe environment for skill development and social opportunities and incorporate activities like music, dance, art, drama and some academic activities (see Lasser & Fite, 2011; Goldstein et al., 2013, for discussion). In the North America context, a preschool normally targets children between the age of 2 and 4 and focuses on pretend and play and joyful learning, whereas, pre-K targets children between the age of 4 and 5 and focuses more on developing skills required to make a smooth transition into formal school. In this paper we are using pre-K as a cover term for both pre-school and pre-kindergarten programs.

programs should be well developed so that they are able to positively mold children's character right from early on, help them identify the good and the bad, make them understand cultural differences and form a foundation which will help them in their life journey. The young brains are more susceptible to danger if they are not given appropriate guidance, and hence it is necessary to teach them the right things to have a more fruitful future. Therefore, pre-K or early childhood education should aim at making the child independent, creating a positive and well-balanced self-image and developing intellectual abilities. In addition, the program should be developed to foster socializing skills, imbuing enthusiasm for learning, and to promote holistic cognitive and social development, such as respect, teamwork and sharing attitude.

We describe three different approaches for pre-K. The first two are traditional and the third can be considered as modern.
i.   The neighborhood tent- based school approach
ii.   The church-mosque based school approach
iii. The Sesame Street TV programs approach

Great examples of the traditional approach are the neighborhood tent based and church-mosque based schools from which two of the authors of this article benefited. For example, it is hard to forget the days the authors spent at 'Enda-Asresu' and 'Enda-Maetebu', two tent-based neighborhood schools in Addi-AbunWereda of the former Adwa district. The two schools were led by two dedicated individuals – a disabled countryman and a retired war-veteran, respectively. Both school masters were known for their disciplinary actions, for example, spanking any child who fell asleep or was not paying attention to the topic they were teaching. The two schools were serving as a pre-K for the very poor (pretty much everyone in the town) with no desks or chairs. With both our parents not literate, there is no question that Enda Asresu and Enda Maetebu had paramount impact on our early childhood life (and perhaps beyond). As pre-K programs, both schools were where we first got introduced to the Ge'ez alphabet, Ge'ez numeracy and Abugida (a Ge'ez-based syllabic writing system). The two schools were foundational in the sense that it was there the journey to our current personal and professional growth started. While these programs are no longer available in the cities, they are still common in some church schools and villages of Tigray. We believe that such formative early childhood education programs should be resurrected and integrated with the current school system through the provision of training and resources to make them nurture inquisitive and investigative minds. This could, in the long term, help the overall education system of the country since the children who come from these traditional schools are ultimately going to end up in the modern schools K-12 (Kindergarten through Grade 12) and beyond.

Sesame Street is a TV-based early childhood educational and literacy program originated in the US with a farther reach around the world. It can be considered as one of the modern

educational approaches, which involves standard TV as a mode of communication. In the United States, it has been used through partnership with public television to bring multilingual educational materials to families and early-childhood education providers and to hold community events focused on various early learning topics. In Canada, a modified version of the program has been aired through the Canadian Broadcasting Corporation (CBC) across the country. The decision was made in 1970s to modify the US version and add Canadian material in order to reflect the Canadian cultural reality. The decision was based on Canada's desire to expose viewers to French rather than Spanish and on the necessity to reflect its own culture and lifestyle of its society. The program has been successful in entertaining and teaching preschoolers and toddlers on how to count, recognize letters, and develop other useful social and cognitive skills.

Sesame Street was an audacious idea because TV is a great way to reach lot of people, very easily and cheaply. The program borrowed techniques from TV commercials to teach children about numeracy, adopted the live animation of "Saturday-Morning Cartoons" to teach lessons about learning the alphabet, and brought in celebrities to sing and dance and star in comedy sketches that taught children about virtues of cooperation or about their own emotions. As Malcolm Gladwell, in his book *The Tipping Point*, points out Sesame Street has been a success because it learned how to make TV sticky withstanding academic scrutiny (the third author is beneficiary of this TV program in his early childhood).

Overall, we are living witnesses of the positive impact of such pre-K programs (of the Ethiopian- and North American-based). In the Ethiopian context, such programs can be developed at different levels in order to bridge cultural and educational gaps. Even in areas where there is access to kindergarten, a systematic reorientation is required with these teachable-experiences in mind. The Sesame Street, for instance, as much as the Canadians did, can be modified to reflect our own culture and language in order to be effective to teach preschoolers important life lessons. The TV landscape in Tigray is growing and such programs could be excellent time slot fillers. Private investors or development associations such as the Tigray Development Association (TDA) could either take ownership or sponsorship of such programs. Important for the success of such programs is developing complementary sessions and free workshops for parents, educators and others interested in early learning on different topics ranging from early reading, math skills for solving problems and promoting creativity to explaining difficult social topics, such as divorce, imprisonment of a family member, death and other similar topics to young children.[2]

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[2] While it is clear that children at different ages react to social topics such as death and divorce differently, the importance of talking children about such key norms has a paramount importance in their education as well as over all well being.

Elementary to Middle School (K1-8)

After pre-K, kids are expected to transition to modern education programs starting from first grade. We share experiences by considering five different modalities for these grade levels:
  a. Gifted and talented
  b. Acceleration
  c. Curriculum compacting
  d. Grouping
  e. Pull-out programs and specialized classes

Gifted and Talented: Gifted and talented education is a special program with a range of unique practices, procedures and theories applied in the education of children who have been identified as gifted or talented. The program is incepted with the assumption that students with high abilities need specialized education programs that will challenge them in regular classroom settings. It is particularly aimed at enriching talented students' educational experience by creating accelerated programs that enable students to make continuous progress in school. According to Loveless et al. (2008), more than 70% teachers of high-achieving students surveyed in their study noted that their students were not challenged or given a chance to "thrive" in standard classrooms. Hertberg-Davis and Callahan (2013, p.9) also noted, gifted students need gifted programs in many cases because the "general education program is not yet ready to meet their needs" due to the lack of educators trained for gifted education and the pressure standard classroom teachers face to raise the performance of their struggling students. Since education in gifted and talented programs is more than just giving students a challenge in classroom settings, the program should be devised to positively influence students' future. For example, SAIL (short for Students Actively Involved in Learning), which the third author participated in throughout his elementary school, is a gifted and talented program. The program accepts students based on the potential to demonstrate high performance ability in academic areas in nationally normed aptitude abilities, achievement, and performance tests. Once accepted into the program, the student is challenged by rigorous, complex classwork pertaining to the Language, Arts, Science, Social Studies, and Mathematics. The program had a profound effect on the author as it challenged him academically in a way that his primary classes could not. It also allowed him to escape the "boredom" felt in his primary classes as he felt that he was working on course material he has already mastered. SAIL also granted him to learn and interact with students who were as academically inclined as himself, further motivating him to learn and grasp the new material being taught by the SAIL teacher. The program itself was particularly beneficial as it gave the author access to accelerated learning with the comfort of being surrounded by children of the same grade level.

The SAIL program functions as an extracurricular to the given learning material in the students' regular classes. Students were pulled out of their normal classes once a week and met in a separate classroom. Students in the third grade were expected to meet with their SAIL class for a minimum of 2 hours and 10 minutes per week while the fourth and fifth graders for a minimum of 3 hours and 20 minutes per week. The implementation of this program can serve as an intermediary or even resolve the issues with/between two aspects that will be discussed further in this paper, accelerated learning and curriculum compacting. Thus, with all these pieces of evidence, it is important that the educational programs in Ethiopia, particularly in Tigray allow specialized programs for the gifted and talented. The resource requirement for such programs is minimal compared to the short and long-term positive impacts such programs have on the children, their families and society at large.

Acceleration/Accelerated education: Two of the most frequently cited characteristics of students identified as gifted and talented are learning speed and advanced abilities (National Association for Gifted Children, 2004; Kanevsky, 2011; Clelland, 2013, among others). Acceleration occurs when students move through traditional curriculum at rates faster than typical (cf. Colangelo et al., 2004). Acceleration, among other things, includes grade-skipping, early entrance to kindergarten, dual-credit courses such as Advanced Placement and subject-based acceleration (e.g., when a fifth-grade student takes a 6th grade math course) (Colangelo et al., 2004; Lubinski et al., 2001). According to Colangelo et al. (2004, p.1) many researchers consider acceleration to be "[an] appropriate educational planning". It means matching the level and complexity of the curriculum with the readiness and motivation of the student. While some argue that acceleration could be harmful to students' self-concept, ability to fit in with older peers, or other social-emotional needs, research on acceleration has demonstrated multiple academic benefits as well (Colangelo et al., 2004). As the National Work Group on Acceleration noted, there is "no evidence that acceleration has a negative effect on a student's social-emotional development" (see the 2009 report of the Institute for Research and Policy on Acceleration, National Association for Gifted Children, and Council of State Directors of Programs for the Gifted, p.4). In fact, accelerated students have also been shown to outperform non-accelerated peers academically in the long term (see Park et al., 2013; Steenbergen-Hu & Moon, 2011 for discussion).

Acceleration is a cost-effective intervention. As Assouline et al. (2015) convincingly pointed out, grade-based forms cost little to implement, and yield societal benefits in that students complete schooling ahead of schedule and become productive adults early in their lives. Costs of subject-based forms may be slightly higher, but still less prohibitive than other forms of gifted programming. On the other hand, UNHCR has identified Acceleration Education as an approach under the Education 2030 Framework for Action to promote access to certified education for children and adolescents who have missed out on substantial amounts of schooling. The UN Refugee Agency of the UNHCR recognizes the need for certified education programming, which

afford flexible and alternative pathways and entry/reentry points into the formal education system. Such an accelerated education system aims to provide access to education for disadvantaged, over-age, out-of-school children and youth – particularly those who missed out on, or had their education interrupted due to poverty, marginalization, conflict and crisis. In this respect, Acceleration as an approach is vital not only for the gifted and talented but also for the disadvantaged student.

In Canada, every province has its own approach for education. Thus, acceleration for the gifted and talented has enormous variability in the way it is permitted and practiced across Canada (Kanevsky, 2011). While explicit support for acceleration and gifted and talented education was strongest in Alberta, BC, New Brunswick, and Nova Scotia, only Ontario and Saskatchewan had legislation supporting the provision of services for gifted students (Clelland, 2013). In Ontario, for instance, there are dedicated programs for the gifted and talented such as the Prestige School of Toronto and programs with dedicated classes for the gifted and talented such as the all girls St. Mildred's-Lightbourn School of Oakville. This approach could be something that needs to be encouraged in Tigray where there is variability in curriculum at different levels.

The first and second authors have experienced acceleration in their elementary school years. While the first author skipped two grades, the third author skipped one, without any detrimental effect. Even though it is difficult to establish cause and effect, acceleration most likely had played a positive role. Another anecdotal success story of skipping grades is a neighbor who skipped a grade and later used the extra year for study abroad. This girl is now a PhD student in computer science. The first author also observed the benefits of acceleration for the gifted and talented at the International Baccalaureate Organization (IBO), where he served as External Examiner for some of the International Baccalaureate (IB) programs. As external examiner, his responsibility was (i) to prepare comprehensive exams for IB students to test their skills based on chosen prescribed booklists and (ii) to assess students' exams based on standard rubric and assessment tools. At IB, students complete advanced interdisciplinary curriculum prescribed by the program. At the end of high school, students take an international examination prepared by educators and receive advanced standing in their postsecondary studies that guarantees university/college admission. This is another approach that needs to be encouraged in Tigray where there is a clearly identified potential for it.

Curriculum Compacting: curriculum compacting is a technique for differentiating instruction that allows teachers to make adjustments to curriculum for students who have already mastered the material to be learned, replacing content students know with new content, enrichment options, or other activities. Renzulli and Reis (2014) recommend that teachers first determine the expected goals of the unit or lesson in terms of the content, skills, or standards students must learn before assessing students to determine which ones have already mastered most or all of the specified learning outcomes. Reis et al. (1998) report that elementary teachers can eliminate from 24%-70% of high-ability students' curriculum through compacting without any negative

effect on test scores or performance. In fact, curriculum compacting can have a positive effect on students' performance. Because many talented students receive little differentiation of instruction from their peers, they spend a great deal of time in school doing work that they have already mastered. However, gifted children can often learn with far less instruction and practice than other students. Curriculum compacting allows these students to avoid relearning material they already know, which research has shown can lead to frustration, boredom and, ultimately, under achievement (see Renzulli & Reis, 2014 for a detailed discussion). As Mathews and Foster (2009) also point out, curriculum compacting also gives some students the chance to explore areas of interest in deeper ways and to master material they otherwise would not have the chance for.

Grouping: educators can use grouping strategies to allow gifted students experience appropriate levels of challenge and complexity. Almost any form of grouping used will provide not only an academic or achievement gain but also positive social and emotional gains to gifted learners. According to Rogers (2006), grouping often is the "most effective and efficient means for schools to provide more challenging coursework, giving [students] access to advanced content and providing them with a peer group (p.1)." In looking at the various types of grouping strategies used with gifted learners, the options can be divided into ability-based and performance-based grouping. Specific strategies for grouping include regrouping for specific instruction, cluster grouping, and within-class/flexible grouping (Rogers, 2006). Students may also experience between-class grouping or grouping by interest, as in the practice of enrichment clusters (Renzulli & Reis, 2014). Educators and schools should note that ability-based grouping is not synonymous with tracking. As Plucker et al. (2010) noted, "[g]rouping is flexible, targeted, and not permanent, [while] tracking historically refers to an inflexible approach to placing students in tracks from which they could not move. Tracking is unquestionably bad, [whereas] ability-based grouping is arguably good (p.31)." Ability grouping was suggested as a way for schools to promote high levels of achievement and shrink excellence gaps among their populations (Plucker et al., 2010). When used properly, ability grouping allows for flexibility, letting students move—either up or down—during their educational careers. As Olszewski-Kubilius (2013) points out, flexible ability grouping allows schools to match a student's readiness with instruction, "delivering the right content to the right student at the right pace and at the right time." Additionally, grouping allows students to learn alongside others who have learnt at similar rates, possess similar levels of knowledge, and share similar goals, resulting in a peer group where students can challenge one another (see Olszewski-Kubilius, 2013 for a detailed discussion). It has been shown that grouping can contribute to overall achievement gains as well (cf. Pierce et al., 2011).

The first and second authors have experienced grouping by performance in their high school time. High performing students were grouped into one or more classrooms allowing for high level competition among students. This was practiced at Queen-Sheba Secondary School, for

instance. However, it was not clear if we or our parents were made aware of the program and its implementation procedures. It would be of paramount importance to inform both the students and parents when students are selected for such programs for the gifted and talented.

Pull-Out Programs/Specialized Classes: gifted programming can be delivered in a combination of ways, including pull-out programs and special classes in a subject or interest area. It also includes special schools (e.g., Academy for Science, Mathematics, and Humanities) or local magnet schools, afterschool/Saturday/summer programs, Advanced Placement or other dual-enrollment courses, distance learning, and other similar services.

Pull-out programs were implemented in the second author's school district for students who excelled in mathematics. Although the author never participated in the program as his school offered advanced mathematics courses, students whose school did not have a large enough student body to take these advanced courses were given the opportunity to be pulled out of class and either driven by a parent or, if fortunate enough, bussed to the local high school and take more advanced mathematics courses (i.e. Geometry and Algebra 2) with high school students. The implementation of these programs, although useful, can raise issues with transportation and self-esteem. If the school/school district cannot afford to arrange a means of transportation for the students to the high school, it may be up to the parents of the students to drop them off at the high school. This can prove especially challenging for working families. This program can also have issues with the levels of self-esteem and social-emotional needs as they will be surrounded by students older than them. In the event that these students may have to work together, conflict may emerge as there can be large age differences amongst the students. However, if implemented carefully, pull-out programs to the local high school can benefit the students as it will provide them an environment in which they are academically challenged and allowing the student to see and adjust to the structure in which high school courses are taught, further easing their transition into years K9-12. We are not aware of the existence of such programs in Tigray.

High-school (K9-12)

K9-12 refers to secondary education (9-10 junior and 11-12 senior secondary) in the current Ethiopian education system. Below are some of the commonly used approaches for K9-12 school system. Each of these Honors Programs requires different level of resources and approaches in the special school system.
   i.   Honors or special merit course for the gifted and talented
   ii.   Honors or special merit classroom for the gifted and talented
   iii. Honors or special high school for the gifted and talented

In all the three examples, gifted and talented students are encouraged to earn special recognition for their outstanding efforts. This is accomplished by providing students to take advantage of the

extensive Advanced Placement offerings at the secondary level and to complete challenging, self-designed community service and Honors projects. For such honors programs to be effective, they need closer coordination between high schools who run such programs and those bodies responsible for placement of students to universities and colleges. For the honors high school to be effective, more facilitators need to be hired and mentors with high achieving teachers need to be assigned. Candidates in the honors program are expected to do the following: (i) Design and complete an in-depth Honors Project, (ii) Complete a four-course sequence in one global language and (iii) Design and complete a Community Service Project. After being selected to the honors program, students work with the school's Honors Program facilitator and with a mentor to successfully fulfill the requirements of the program. For example, the third author attended a special high school in which students were mandated to complete at least 90 hours of service in the 4 years in which they attended. The student may receive no monetary supplement for their service and the hours must be logged and signed by a project supervisor who serves in one or two service projects but serving on multiple projects is acceptable. The service must also be approved through the presentation of the project to an advisor; typically, the Focus course teacher. The Focus course period's function was to provide the students a time in which they can study for upcoming tests, complete homework assignments, talk to teachers about any issues they may be having in class, make-up exams they may have been absent for, etc. During this class period, students were assigned a classroom, but after the initial reading period, the first 30 minutes of the class, the students were free to go to any classroom that they needed for the remaining hour so long as the focus teacher was notified. Students who volunteered for 120+ hours were further rewarded through the awarding of a special chord at graduation. Adjustments to the required amount of service were considered on a case-by-case basis for students who transferred during the 11th or 12th-grade year.

While the special merit class and special high school programs have been practiced in Tigray, it is not clear if the special course-based program has ever been implemented in any of the standard schools. In our view, since all towns and districts may not have the resources to build a special high school, the first two alternatives could be used as cost effective means to provide opportunity for the gifted and talented students.

Guidelines for Honors Project

An Honors Project is one of the requirements of the Honors Program. While the Honors Project may be based in any discipline and may result in a wide variety of final products, the project itself demands designing and completion of a complex task in an area of personal interest. The project should lead to individual growth and be an extension of learning beyond the student's coursework. The project begins with a defendable thesis and affords depth, challenge, and rigor as the student stretches his/her interests and talents. The project's focus should not be on the final

product but on the entire process; therefore, a reflective essay describing the student's rationale, process, and results must be included.

For example, the high school in which the third author attended mandated students to take two specific classes, Theory of Knowledge [TOK] and Review of Literature. Each class is a semester long, designed with specific goals. TOK was engineered to teach how to do effective research, read/annotate scholarly articles, and explore interests in regards to the Honors project. Review of Literature focuses on the review of literature so that students can submit portions of their review as the semester progresses. This could be 1-2 pages per week. Submissions are read by the thesis teacher and feedback can be given pertaining to the writing skills and consistency of the information (not necessarily the accuracy of the information). By the end of the course, around 10 pages of the rough draft of the literature review are expected to be completed. The final project is expected to display the student's learning process and show the student's interest in the field of study. Over the summer, the student is expected to begin and/or even complete the data collection of the project. By early August, the student was expected to submit an edited/final version of the review of literature (13 pages with at least 15 sources), a time schedule, and some outline of data entry along with a journal with at least 3 page long entries per week detailing the progress. The final project should include at least a 24 page, including the 10+ pages of the review of literature, paper highlighting the overview of the project, the process undertaken by the student, and the outcomes anticipated and received by the student. The student must have the paper completed and submitted to his/her mentor and advisor at least a week before presentation date. The presentation must be attended by advisor, mentor, and a third party (another expert in the field of study or another teacher, an expert in the thesis process). The presentation and final project will be graded by the three individuals who attended the presentation with the mentor determining the largest percentage of your grade, followed by the advisor and the third party.

College and University

In order to see the gifted and talented students progress towards high achieving professionals, they need to be enrolled in Honors programs at a college/university level. Two commonly used approaches include (i) creating an Honors College or (ii) offering Honors courses within a regular college. These approaches are expected to attract, train and retain students who might have otherwise chosen another regular/standard college or university. For example, at the University of South Carolina and Clemson University (two universities in the state where the second and third authors live), the invitation to the honors college comes with a merit-based scholarship and honors housing or dormitory. The honors program involves a set of academic courses and a senior thesis or research project with a faculty member. Some of the benefits of an Honors College include students get a chance to attend smaller class sizes (20-25 students) taught by full-time faculty from freshman year onward. This means that they may get the education equivalent to a smaller private school for much less money. Honors programs that

include honors housing put highly motivated students together. Honors credentials, including excellent grades and a promising thesis, can be an excellent springboard for graduate school or other professional graduate degree programs.

However, an Honors College is not without disadvantages. These programs could be the first inline to get budget cuts when there are budget issues in the college which could lead for these students to be combined in traditional large lecture courses. Moreover, while a student who plans to continue their education after college will benefit from excellent grades and academic credentials, other students benefit more from an extracurricular activity, such as music or a sport that is a very important part of their life, and possibly their future career. Other students believe that they might be better off gaining work experience through internships or co-op programs; these take time away from traditional college courses. It is important that programs that serve the gifted and talented students are available to sustain the investments made on these students starting from pre-K.

Another good example for the Honors program is found at the University of Toronto in which the first author had a chance to teach and undertake research. Most of the undergraduate programs permit students to participate (based on previous background) in undertaking research and attending courses particularly targeting special skills development. The author observed that students who joined the university with IB diploma or from specialized schools show a great deal of academic progress and choose a career easily from the freshman year.

Typically, honors college could be exercised in the Ethiopian universities depending on their human and physical resources. The Honors college is more likely to exist in large and well-resourced universities, while Honors programs could exist in smaller and less resourced universities. While there is similarity in what each of these offers, they differ in terms of infrastructure and operation requirements. It is wise to start from an Honors program that offers Honors course instead of spending a lot of resources to build an Honors college. It needs to be clear that when creating an Honors College, the college should get authority to act as a college. Moreover, a change in infrastructure must occur to implement such authority effectively, i.e., the organization must behave like an accredited college that provides quality education. Additional resources are required including space, staff and budget to provide the tools necessary to work as a college.

Conclusion and recommendations

In this paper we have discussed tailored education programs from Pre-K to College/University. We have shown our personal experiences as students, teachers as well as educators. Recently, there have been interesting discussions about creating specialized high schools, technical colleges and even universities for the gifted and talented students in Tigray. These discussions

are timely and need to be calibrated with best experiences locally as well as from around the world. Decisions about resource allocation have to be made carefully since available resources are limited. The options presented in this reflection paper are intended to contribute to the ongoing discussions on the topic and to come up with cost effective and workable solutions for all levels of schooling. Thus, stakeholders who are engaged in the planning and policy making efforts might need to consider these tested practices and adopt them to the local setting. In fact, some of the practices we described above have been tried in the Tigray setting and some data could be collected to assess their effectiveness. For those that were not practiced in Tigray, we would like to underscore that our intention is not to provide policy prescription. It is rather to engage in the discussion on this topic in a more formal way.

While some commonalities exist across gifted and talented programs, one size does not fit all. Gifted learners exhibit different characteristics, traits, and ways of expressing their talents. Various issues must be considered for identification (Thompson, 2011; Suotnik et al., 2010, Bleske-Rechek et al. 2004, among others):

i.   *Giftedness is dynamic, not static.* Identification needs to occur over time, with multiple opportunities to exhibit gifts. One test at a specific point in time should not dictate whether someone is identified as gifted.

ii. *Giftedness is represented through all racial, ethnic, income levels, and exceptionality groups.* It is important that identification processes account for underrepresentation of minority groups.

iii. *Giftedness may be exhibited within a specific interest or category—even a specific interest within that category.* Professionals must seek ways to gather examples across various domains and contexts.

iv. *Early identification of gifts in school improves the likelihood of developing gifts into talents.*

Recommendations for Identification of the Gifted and Talented in Tigray

Typically, identification policies and procedures should be determined at the woreda level. Because no two gifted children are alike, it is important to collect information on both the child's performance and potential through a combination of objective (quantifiably measured) and subjective (personally observed) instruments in order to identify gifted and talented students. Weredas should follow a systematic, multi-phased process for identifying gifted students to find students who need services beyond the general education program: 1) Nomination or identification phase; 2) Screening or selection phase; 3) Placement phase. In the nomination and screening phase, various identification tools should be used to eliminate bias. Every school and wereda should have an expert in gifted education available to provide services and advise to colleagues. But because gifted and talented students often end up in the regular classroom or depend on regular classroom teachers for referrals for gifted education programs and services, it

is crucial that all teachers have a basic understanding of how to identify and work with gifted students. Perhaps, in order to make most teachers receive training in the needs of high-ability students or gifted education practices, colleges/universities at different weredas can organize short training.

Finally, we would like to indicate that the article may have some limitations especially our bias towards the favorable view towards tailored education programs. It is possible that there are some who may not view such programs as helpful as we depict it here. However, as parents, students and educators who have benefited from tailored programs for ourselves and families, we felt obligated to share those experiences so that policy makers can make use of them as inputs to formulate specialized education programs at all levels. Moreover, future exploration of other relevant, but not quite identical to tailored education, approaches in personalizing the learning experience (adaptive learning, blend learning, competency-based learning, differentiated learning and individualized learning) might be needed.

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