

MEETING THE NEEDS OF GIFTED STUDENTS THROUGH THE USE OF SUBJECT ACCELERATION AT SYDNEY BOYS HIGH SCHOOL

Dr K. A. Jaggar September, 2017

GOALS OF SCHOOLING FOR THE GIFTED

- Goal 1: Australian schooling promotes equity and excellence
- Schools must:
 - promote a culture of excellence by providing challenging and stimulating learning experiences
 - Promote personalised learning that aims to fulfil the diverse capabilities of each young Australia

*Melbourne Declaration December, 2008
[Hobart 1989, Adelaide 1999.]*

OBJECTIVES OF SCHOOLING FOR THE GIFTED

- Gifted students should be challenged through the provision of learning experiences in combinations of:
 - Enrichment at the same level of challenge
 - More work at a higher level of challenge
 - Work that meets their specific needs and interests
 - Opportunities to spend time with others of like ability and interests

ACCELERATED PROGRESSION

- Accelerated progression.....involves the promotion of a student to a level of study beyond that which is usual for their age.

Guidelines for Acceleration 2000

- Not every outcome has to be fully attained at the current level but a very high standard of achievement is expected.
 - Policy and Implementation Strategies for The Education of Gifted and Talented Students 2004

PREREQUISITES FOR ACCELERATION

- All the important learning expected in the stage outcomes statement has been achieved. That is, stage outcomes have been mastered by the applicant.

[We expect stage 5 outcomes to be completed
by the end of Year 9]

- That the individual is socially and emotionally ready for advancement and that lateral extension would be insufficient.

[This is an important family consideration – autonomous and self-regulated learner]

GROUPING FOR ACCELERATION

Within Class Structures

- Implementing flexible progression through existing class structures is a feasible but difficult intervention. Gifted students follow individual or group programs at the next academic stage.
- A teacher acts as a mentor for the individual or group as they are working independently on advanced curriculum.

GROUPING FOR ACCELERATION (CONT.)

Vertical Grouping

- **Vertical grouping** is the scheduling process in which students in different Year groups are timetabled to be taught together for particular courses.
- Year 10 and Year 11 are timetabled to align the subject to be taught. Year 10 students go to Year 11 classes.
- [For our Year 10 electives students that means 10 of 11 periods]

GROUPING FOR ACCELERATION (CONT.)

Whole Class Grouping

- The most effective delivery method for subject acceleration is whole class grouping. All the chosen students can be exposed to the same complexity of material at the same time and at the same pace.
- This is the preferred and usual mode at High.

GROUPING FOR ACCELERATION (CONT.)

Multiple Class Acceleration

- At High we have multiple class acceleration in mathematics in Year 11.
- Several classes of students are exposed to all of the stage 6 Mathematics 2-unit course and if judged to be of an acceptable standard, the top 80 are allowed to sit the Higher School Certificate at that level in term 4, Year 11.

GUIDELINES FOR THE USE OF STRATEGIES TO SUPPORT GIFTED AND TALENTED STUDENTS 2004

- Guidelines for the use of strategies to support gifted and talented students
- Subject Acceleration (p6)
- Accelerated Progression (p8)
- International Guidelines (p9)
- <http://www.curriculumsupport.education.nsw.gov.au/policies/gats/assets/pdf/polgdl.pdf>

SUPPORT PACKAGE 2004: ACCELERATION

- Approaches to Acceleration (pp 8-10)
- Assessment (p 12)
- Types of Acceleration (pp 13-14)

- Please see <http://www.sydneyboyshigh.com/curriculum/subject-acceleration> for further information

ACCELERATION ASSUMPTION

Assumption: Students are capable of understanding concepts and acquiring skills faster than their age peers for whom the comprehensive curriculum was designed.

Limitation: The degree of intervention in stages 5 and 6 is limited because of instructional time reduction.

Eg There are normally 22 x 60 minute periods per cycle assigned for 2 unit courses over two years. Year 10 electives have only 10 periods. As a result accelerants have only 21 periods per cycle over two years.

SELECTING STUDENTS FOR ACCELERATION

- Has the student demonstrated a comprehensive achievement well in advance of the enrolment cohort when performance is assessed against the outcomes of the current curriculum stage?
- What level of achievement of the outcomes of the next curriculum stage is the student already demonstrating?

Policy and Implementation Strategies for the Education of Gifted and Talented Students 2004

SUBJECT ACCELERATION POLICY SBHS

[www.sydneyboyshigh.com/curriculum/subject acceleration](http://www.sydneyboyshigh.com/curriculum/subject%20acceleration)

SELECTING STUDENTS FOR ACCELERATION (CONT.)

- Capacity Motivation to accelerate
- Attainment Autonomy as a student
- Social readiness Pattern of future study
- Emotional maturity

POSITIVES OF ACCELERATION

- Saving time in Year 12 after completing a 2-unit course
- Increased challenge for Year 10 boys
- Having an opportunity to sit for a subject a student might not otherwise have attempted at HSC level
- Being able to focus on a subject involving a major work
- Ability to access an Extension Course not otherwise attempted
- Experiencing the HSC climate when attempting only one subject
- Understanding how much effort is required to achieve the result desired at HSC level
- Beat the 4 subject rule [4 maths + 4 English+ 2 unit X in Year 12]
- Have more units available when calculating ATAR
- Gaining greater confidence in Stage 6 cognitive challenge
- Having a safety net in case subject acceleration doesn't work out

NEGATIVES OF ACCELERATION

- Concerns that accelerant performance might be stronger one year later with more maturity.
- Not enough class time over the two years makes more independent learning necessary.
- Some compaction of curriculum is necessary to complete the course in the time allocated.
- Anxiety about personal capacity to succeed at acceleration raises personal stress levels
- Time management, school communication and self organisation issues have to be addressed constantly.
- Gauging the appropriate effort required for HSC Band 6 performance in a non-high stakes year is a challenge

NEGATIVES OF ACCELERATION (CONT.)

- Internal communication between cohorts regarding scheduling, assessment tasks and examinations is not always error free
- Curriculum delivery time is reduced to 21 x 60 minute periods per cycle over the two years v usual 22 x 60.
- Identification and selection procedures are department based and cannot always predict success in a new course or discipline.
- Having a safety net can be a de-motivator if a student believes a second attempt is available

RECENT SUBJECT ACCELERATION RESULTS

MODERN HISTORY

Whole Class

	Number of Students	HSC Mean	Standard Deviation
2011	13	$\bar{X} = 89.23$	$\sigma = 1.92$
2012	10	$\bar{X} = 92.1$	$\sigma = 2.33$
2013	11	$\bar{X} = 90.55$	$\sigma = 2.23$
2014	3	$\bar{X} = 89.33$	$\sigma = 1.53$
2015	17	$\bar{X} = 90.82$	$\sigma = 2.65$
2016	24	$\bar{X} = 88.05$	$\sigma = 3.49$

RECENT SUBJECT ACCELERATION RESULTS

BUSINESS STUDIES

Whole Class

	Number of Students	HSC Mean	Standard Deviation
2011	10	$\bar{X} = 93.3$	$\sigma = 2.57$
2012	11	$\bar{X} = 90.8$	$\sigma = 3.82$
2013	14	$\bar{X} = 93.79$	$\sigma = 2.39$
2014	13	$\bar{X} = 91.40$	$\sigma = 2.64$
2015	15	$\bar{X} = 93.2$	$\sigma = 2.57$
2016	13	$\bar{X} = 90.46$	$\sigma = 3.13$

RECENT SUBJECT ACCELERATION RESULTS – MUSIC 2

Whole Class

	Number of Students	HSC Mean	Standard Deviation
2011	8	$\bar{X} = 87.25$	$\sigma = 4.41$
2012	5	$\bar{X} = 92.4$	$\sigma = 2.79$
2013	8	$\bar{X} = 94.50$	$\sigma = 2.39$
2014	7	$\bar{X} = 93.29$	$\sigma = 1.50$
2015	16	$\bar{X} = 89.56$	$\sigma = 3.31$
2016	5	$\bar{X} = 92.4$	$\sigma = 1.52$

RECENT SUBJECT ACCELERATION RESULTS

GEOGRAPHY

Vertical Grouping

	Number of Students	Mean	Standard Deviation
2010	11	$\bar{X} = 87.8$	$\sigma = 3.6$
2011	6	$\bar{X} = 89.67$	$\sigma = 2.05$
2012	1	$\bar{X} = 91.0$	$\sigma = 0.0$
2013	4	$\bar{X} = 92$	$\sigma = 1.15$
2014	3	$\bar{X} = 90.33$	$\sigma = 0.58$
2015	3	$\bar{X} = 87.66$	$\sigma = 2.08$
2016	6	$\bar{X} = 90.67$	$\sigma = 1.52$

SUBJECT ACCELERATION RESULTS – DESIGN & TECHNOLOGY: SMALL CLASS

	Number of Students	Mean	Standard Deviation
2008	2	$\bar{X} = 95$	$\sigma = 0$
2012	5	$\bar{X} = 85.6$	$\sigma = 4.39$
2013	1	$\bar{X} = 81$	$\sigma = 0$
2015	3	$\bar{X} = 93.66$	$\sigma = 0.57$
2016	3	$\bar{X} = 93.33$	$\sigma = 0.47$

RECENT SUBJECT ACCELERATION RESULTS WITHIN CLASS GROUPING OR MENTORING OF ONE – MUSIC 1

	Number of Students	Mean	Standard Deviation
2008	1	$\bar{X} = 98$	$\sigma = 0$
2010	3	$\bar{X} = 87.3$	$\sigma = 3.09$
2012	1	$\bar{X} = 82$	$\sigma = 0$
2014	1	$\bar{X} = 96$	$\sigma = 0$
2015	1	$\bar{X} = 96$	$\sigma = 0$

SCIENCE – MENTOR MODEL (RARE)

	Number of Students	Mean	Standard Deviation
2007	1- biology	$\bar{X} = 91$	$\sigma = 0$
2008	1- Chemistry	$\bar{X} = 86$	$\sigma = 0$
2016	1- physics	$\bar{X} = 94$	$\sigma = 0$

RECENT SUBJECT ACCELERATION RESULTS MATHEMATICS 2 UNIT – MULTIPLE CLASSES

	Number of Students	Mean	Standard Deviation
2011	80	$\bar{X} = 93.7$	$\sigma = 2.8$
2012	80	$\bar{X} = 93$	$\sigma = 3.2$
2013	80	$\bar{X} = 93.9$	$\sigma = 2.6$
2014	80	$\bar{X} = 95.3$	$\sigma = 2.3$
2015	80	$\bar{X} = 95.8$	$\sigma = 2.7$
2016	78	$\bar{X} = 95.4$	$\sigma = 2.2$

SEVEN STEPS TO SUCCESSFUL SUBJECT ACCELERATION

- Identification
- Selection
- Individual Learning Plans
- Intervention Design
- Management/Monitoring
- Evaluation
- Analysis of results

ACCELERATED BUSINESS STUDIES AND GEOGRAPHY

Identification

- Students are informed of the criteria for subject acceleration: term 3 (year 8) & term 1 (Year 9).
- During semester 1 in Year 9 students with a high level of interest in Geography and /or Commerce are identified.
- A **High Distinction** or **Distinction** assessment in Year 9 Commerce or core Geography is required.
- A stage 4 history of high achievement in Geography is required.
- Year 9 academic performance at least at credit level standard in all other subject areas.
- Students complete an Expression of Interest form and submit it to the Head Teacher of Social Science.

ACCELERATED BUSINESS STUDIES AND GEOGRAPHY (CONT.)

Selection

- Students identified from the above criteria are interviewed by the Social Sciences Head Teacher about the 2 unit Business Studies or Geography course and subject acceleration.
- Students complete an application form for subject acceleration.
- Students' parents are contacted by the Social Science Head Teacher about the chosen 2- unit Business Studies or Geography course and subject acceleration.
- Parents are referred to the Board of Studies publication *Guidelines for Accelerated Progression* at www.boardofstudies.nsw.edu.au/manuals&guides/pp16-40

ACCELERATED BUSINESS STUDIES AND GEOGRAPHY (CONT.)

Selection (cont.)

- Parental permission form is completed, signed by parents and student, dated and filed with Social Science Head Teacher.
- The lodgement of a permission form implies a parental belief that their son is a motivated, independent learner and is capable and suitable for subject acceleration, in the context of the Board of Studies policies and guidelines on accelerated learning and the Sydney Boys' High School Social Science policy for acceleration of Year 10 students.
- The chosen course should fit well with the strategic direction of the *Individual Learning Plan*.
- A final decision on successful applicants for subject acceleration is delayed until after the Year 9 examination results are analysed.

ACCELERATED BUSINESS STUDIES AND GEOGRAPHY (CONT.)

Individual Learning Plans

- Before commencing the higher level course each student submits a draft Individual Learning Plan to the Head Teacher of the subject.
- Before experiencing the higher level course each student is required to complete and submit to the Principal, an Individual Learning Plan approved by the Head Teacher, by the time the Year 9 results are prepared for the Principal.
- The Individual Learning Plan is completed according to the school template [Appendix 1]
- The Plan has to be approved by the Principal and is kept on file.

ACCELERATED BUSINESS STUDIES AND GEOGRAPHY (CONT.)

Intervention Design

- The Social Science Department compacts the stage 5 curriculum in Year 9.
- The Stage 5 class follows the stage 6 syllabus in Year 10
- Successful students are allowed to enrol in and complete the Preliminary course.
- Accelerants are always expected to perform above the mean of the entire cohort and be on task for a band 6 performance.
- Those who aren't performing are given one chance to improve but this needs to be settled by the end of the Preliminary course.

ACCELERATED BUSINESS STUDIES AND GEOGRAPHY (CONT.)

Intervention Design (cont.)

- Unsuccessful students are awarded a Year 10 grade A in Geography or Commerce.
- Marginal students are allowed to sit the Preliminary examination on condition that they discontinue the course for Year 12.
- Students continuing with the Commerce Program in Year 10 will benefit from a highly differentiated Commerce Curriculum covering in depth topics related to HSC courses in Economics, Business Studies and Legal Studies. Extension and enrichment strategies will provide an increased awareness and understanding of relevant social issues and an excellent foundation for future study of these courses.

ACCELERATED BUSINESS STUDIES AND GEOGRAPHY (CONT.)

Management / Monitoring

- The establishment of and agreement to performance standards for each student
- The student is to achieve the objectives set out in the course requirements through:
 - demonstration by an ability for independent, autonomous learning.
 - completion of holiday reading tasks, demonstrating self-regulation
 - class work and homework completed on time and at a consistently high standard.
 - completion of all assessment tasks on time and at a consistently high standard.
 - regular submission of project work for teacher review.

ACCELERATED BUSINESS STUDIES AND GEOGRAPHY (CONT.)

Management / Monitoring (cont.)

- Counselling of students not meeting the course performance standards.
- Students unable to maintain the agreed course performance standards in Preliminary are not allowed to progress to the HSC course.
- Students not completing Preliminary Course satisfactorily are eligible for an “A” grade in the School Certificate in Geography or the Commerce Elective.
- The usual Stage 6 monitoring and communication processes occur in terms of student assessment task feedback, student reports and warning letters to parents.
- Students are responsible for their own progress and excuses are not accepted.

ACCELERATED BUSINESS STUDIES AND GEOGRAPHY (CONT.)

Evaluation of the intervention

- How well was the above level curriculum grasped by the accelerants?
- Were any short cuts necessary?
- Was some compaction of stage 6 achievable?
- What were the effects of the intervention on work ethic?
- Did the students overcome the anxiety and stress associated with acceleration?

INDIVIDUAL LEARNING PLAN

- Statement as to why the applicant student wants to do the course
- Evidence of an understanding of the aims and benefits of the programme
- Course selection matrix for Year 10-12 including numbers of units. (Year 11 – Maximum 12)
- Statement of commitment to the Extension Course Year 12 (where applicable)
- Target ATAR and tertiary intentions

ACCELERATED BUSINESS STUDIES AND GEOGRAPHY (CONT.)

Results

- An analysis of Preliminary and HSC results is undertaken annually.
- Accelerants results are compared to non-accelerated progression results.
- Single class results are compared to single class results from previous years.
- Individual results are tracked to the HSC to compare Geography or Business Studies results with the students' results in other courses.
- Are there increased Band 6s for Geography and/or Business Studies over time?
- Is there a larger candidature overall for social science in the medium term?

ACCELERATED BUSINESS STUDIES AND GEOGRAPHY (CONT.)

Evaluation of the intervention (cont.)

- Was the school's communication effective for mixed year candidates?
- Did the students express satisfaction with their experience of the intervention?
- Did Year 11 students in mixed year classes improve their performance as a result of competition from Year 10 students?
- What are the effects on participation trends in social science courses over the medium term?
- Have the students completed an evaluation survey?

INDIVIDUAL LEARNING PLAN (CONT.)

- Commitment Statement to undertake necessary research/project study to excel in the course
- Commitment to undertake necessary vacation work for Preliminary and HSC courses
- Proposed use of the time saved by subject acceleration in Year 12
- Student and Parent names, date and signatures included.

- Why I want to do the course

-
-
-
-

- Understanding of the aims and benefits of the program

-
-
-
-

PATTERN OF STUDY: COMPLETE PRELIMINARY AND HSC COURSES FOR YEARS 10, 11 AND 12: 12 UNITS NEEDED FOR PRELIMINARY; HSC 10

Subject	Y10 2018	Y11 2019	Y12 2020	Subject	Y10 2018	Y11 2019	Y12 2020
Ancient History	█			German Extension	█	█	
Biology	█			History Extension	█	█	
Business Studies		█		Latin Continuers	█	█	
Chemistry	█			Latin Extension	█	█	
Chinese Continuers	█			Legal Studies	█	█	
Chinese Extension	█	█		Mathematics	█		
Design & Technology	█	█		Mathematics Extension 1	█		
Drama	█	█		Mathematics Extension 2	█	█	
Economics	█			Modern History	█	█	
Engineering Studies	█			Music 1			
English Advanced	█	✓	✓	Music 2			
English Extension 1	█	✓		Music Extension	█	█	
English Extension 2	█	█		PD/Health/PE	█	█	
French Continuers	█			Physics	█		
French Extension	█	█		Software Design and Development	█		
Geography				Studies of Religion (1 Unit)	█		
German Continuers	█	█		Studies of Religion (2 Unit)	█	█	
				Visual Arts	█	█	

- ATAR Target/Tertiary Study and Intentions

-
-
-

- Proposed use of time saved by accelerating in (subject) (and finishing early) during Year 12

-
-
-

- I agree to undertake the necessary research/project study to excel in the course
- I agree to undertake the necessary vacation work for Preliminary and HSC courses

- Signed:
- Student:
- I have informed myself about the Board of Studies Guidelines for subject acceleration
- I have discussed the proposed pattern of study with my son
- I give my permission for my son to participate in this subject acceleration course

- Parent/Guardian:
- Date:

