

Survey on Senior Secondary Subject Information 2015/16 School Year

Main Findings

A. Background

1. The Education Bureau (EDB) conducted the “Survey on Senior Secondary Subject Information: 2015/16 School Year” from October to November 2015 on 448¹ secondary schools in Hong Kong offering the local senior secondary (SS) curriculum, to collect information on the SS subjects they offered at Secondary 4 (S4), Secondary 5 (S5) and Secondary 6 (S6) in the 2015/16 school year. These included all government, aided and caput secondary schools, and secondary schools under the Direct Subsidy Scheme offering the local curriculum; and did not include private, international, evening and hospital schools nor correctional institutions.
2. This Survey collected both school level (subject-offer) and student level (subject-taking) data. It should be noted that the student level data on S6 was taken from the Hong Kong Diploma of Secondary Education (HKDSE) Examination registration information on the schools participating in this Survey, provided by the Hong Kong Examinations and Assessment Authority in January 2016, as a proxy for S6 student subject enrolment. The S6 figures for all years quoted in the remainder of this document are HKDSE Examination registration figures of the respective years.
3. Information collected from this Survey has been informing the planning and implementation of the SS curriculum and assessment. Survey results over time have indicated that subject-offer and subject-taking patterns are becoming more stabilised. The EDB will continue to observe these patterns to optimise students’ learning experiences according to their abilities and interests, for example, through encouraging students to take three elective subjects (including Applied Learning) if ability permits, to participate in Other Learning Experiences to broaden their horizons, to explore and choose subjects and pathways that suit their interests and future development, so that they can build on their strengths and stretch their potential to achieve the aims of lifelong learning and whole-person development.

¹ There are 447, 448 and 448 schools operating S4, S5 and S6 classes respectively. One school had stopped operating S4 classes from the 2015/16 school year.

B. Main Findings

Schools' Subject Offer

4. The SS curriculum under the New Academic Structure (NAS) is learner-focused and aims to provide students with a good range of subject choices to cater for their different interests and needs. Overall, schools offered a broad and balanced curriculum with a good range of subject choices for students to cater for their interests and diversified learning needs. Applied Learning, being an important component to complement the core and other elective subjects and provide further diversity to the SS curriculum, was offered by an increasing proportion of schools and student enrolment ratio had remained stable. Details are given below.

Schools continued to offer adequate elective subject choices for students

5. In the 2015/16 school year, schools on average offered about 11 elective subjects at each of S4, S5 and S6, with an increase of 5% on the proportion of schools offering 11 elective subjects or more at S4 as compared with the previous year². The more popular elective subjects (offered by over 70% of the schools) include “Biology”, “Physics”, “Chemistry”, “Economics”, “Geography”, “Business, Accounting and Financial Studies”, “Information and Communication Technology”, “Chinese History” and “Visual Arts”. Relatively fewer schools (less than 10%) offered “Integrated Science”, “Technology and Living” and “Literature in English” (Details on 2015/16, see Table 1 of the Annex). The pattern of elective subjects offered is similar to those of the last six school years.

More schools offered Applied Learning

6. Over the seven years since the implementation of the NAS, an increasing proportion of schools offered Applied Learning³ to S5 students⁴ with an increase of 10% in the 2015/16 school year as compared with that of the first year, now reaching 70% of schools. Student enrolment ratio⁴ has remained stable at 8%. In line with the promotion of Vocational and Professional Education and Training (VPET) and to encourage more schools to offer Applied Learning courses so that more students with interests in Applied Learning can benefit, the EDB has provided full subsidy for students to take Applied Learning courses starting from the 2016/17 school year.

² Proportion of schools offered 11 elective subjects or more at S4 – 2014/15: 60.9%; 2015/16: 64.2%

³ Applied Learning Chinese (for non-Chinese speaking students) is not included

⁴ As S5 is the entry point of the majority of Applied Learning courses, the focus is on S5:

- Offer at S5 – 2010/11: 63.4%; 2011/12: 64.2%; 2012/13: 68.7%; 2013/14: 68.4%; 2014/15: 69.2%; 2015/16: 69.9%
- Enrolment ratio at S5 – 2010/11: 8.3%; 2011/12: 8.1%; 2012/13: 8.2%; 2013/14: 7.9%; 2014/15: 8.0%; 2015/16: 8.0%

7. In the 2015/16 school year, about 8% of S5 students studied in 38 Applied Learning courses from 70% of schools, and 7% of S6 students registered for 36 Applied Learning courses under the HKDSE from 67% of schools (Details on 2015/16, see Table 1 of the Annex).

Students' Subject-taking

8. Under the NAS, students have greater freedom to choose elective subjects according to their own interests and needs. As students' choices of elective subjects are affected by different factors such as students' interests and aspirations, career and life planning under the guidance of their schools, it is normal that the enrolments of subjects vary across years. Overall, students' choices of elective subjects were diversified, and some positive trends on individual subjects such as Chinese History, Science subjects, and the Extended Part of Mathematics were observed. In general, enrolment patterns have become more stabilised in recent years as schools and students have a better understanding of the scope and requirements of the SS subjects after a few cycles of implementation. Details are given below.

Enrolment ratio in Chinese History showed positive change

9. Observing the trend over the seven years, student enrolment ratio in Chinese History⁵ had been increasing for two years in the 2014/15 and 2015/16 school years with a 6% increase at S5 and 9% increase at S6. For S4, there had been an increase of 2% in the 2013/14 and 2014/15 school years and a drop of 3% in the 2015/16 school year.
10. In the 2015/16 school year, Chinese History was offered by more than 86% of the schools at all three year levels, and student enrolment ratio ranked 7th (at S5, S6) and 8th (at S4) among 20 elective subjects (Details on 2015/16, see Table 1 of the Annex).

About half of the students took Science subjects

11. Observing the trend over the seven years, overall enrolment ratio in Science subjects⁶ has been relatively stable, with more than 50% of S4 students taking one or more subject(s) from the Science Education Key Learning Area (KLA). This can help prepare students for science-related studies and promote Science, Technology, Engineering and Mathematics (STEM)

⁵ Enrolment ratio in Chinese History:

- S4 – 2009/10: 16.4%; 2010/11: 15.2%; 2011/12: 14.0%; 2012/13: 13.4%; 2013/14: 13.6%; 2014/15: 13.7%; 2015/16: 13.3%
- S5 – 2010/11: 13.5%; 2011/12: 12.7%; 2012/13: 11.8%; 2013/14: 11.7%; 2014/15: 12.3%; 2015/16: 12.4%
- S6 – 2011/12: 11.7%; 2012/13: 10.8%; 2013/14: 10.2%; 2014/15: 10.3%; 2015/16: 11.1%

⁶ As S4 is the entry point of the SS subjects, the focus is on S4. Enrolment ratio in Science Education KLA subjects:

- S4 – 2009/10: 55.6%; 2010/11: 55.5%; 2011/12: 55.7%; 2012/13: 54.7%; 2013/14: 53.7%; 2014/15: 53.1%; 2015/16: 53.6%

education. In addition, close to 40% of S4 students with a science subject(s) also took elective subjects from other KLAs to broaden their horizons and knowledge base.

12. In the 2015/16 school year, around 54% of S4 students, 51% of S5 students and 49% of S6 students took one or more Science subjects (Details on 2015/16, see Table 2 of the Annex).

Enrolment ratio in Mathematics Extended Part (M1/M2) became more stabilised

13. Observing the trend over the seven years, student enrolment ratio in M1/M2⁷ has become more stabilised in recent years, and an increase of 4% was observed at S4 in the 2015/16 school year as compared with the previous year. In recent years, local universities have attached greater importance to the Extended Part of Mathematics. M1/M2 is recognised by an increasing number of universities (e.g. The Hong Kong University of Science and Technology, The Chinese University of Hong Kong, City University of Hong Kong and The Hong Kong Polytechnic University) as being equivalent to other SS elective subjects in their admissions considerations. Individual faculties of many institutions have also increased the weighting of M1/M2 in the calculation of admissions scores based on the actual situation. More students are thus expected to take M1/M2 in the coming two or three years.
14. In the 2015/16 school year, about 18% of S4 students, 17% of S5 students and 14% of S6 students took M1/M2 (Details on 2015/16, see Table 1 of the Annex).

Students' choices of elective subjects remained diversified

15. Schools no longer streamed students into the conventional arts, science and commerce classes, and students' choices of elective subjects were observed to be diversified and not limited to one KLA. In the 2015/16 school year, 68% of S4 students, 65% of S5 students, and 57% of S6 students took elective subjects from two or more KLAs (Details on 2015/16, see Table 3 of the Annex).
16. In the 2015/16 school year, there were over 1 000 subject combinations each for S4 and S5; and over 900 subject combinations for S6. There were on average 36, 41 and 41 combinations in schools at S4, S5 and S6 respectively (these include Applied Learning courses for S5 and S6) (Details on 2015/16, see Table 4 of the Annex). The top 30 combinations of elective subjects

⁷ As S4 is the entry point of the SS subjects, the focus is on S4. Enrolment ratio in M1/M2:
• S4 – 2009/10: 33.0%; 2010/11: 30.0%; 2011/12: 24.4%; 2012/13: 18.7%; 2013/14: 18.2%; 2014/15: 16.9%;
2015/16: 17.6%

taken by students are tabulated for S4, S5 and S6 students (Details on 2015/16, see Table 5 of the Annex).

Proportion of students taking three elective subjects on downward trend

17. Observing the trend over the seven years, the proportion of students taking three elective subjects⁸ has been on a downward trend, reaching 17% in the 2015/16 school year at S6. Similar downward trend is experienced at S4 and S5. This trend is not conducive to broadening the knowledge base of students. In recent years, EDB has been communicating with the school sector on encouraging students to study three elective subjects where ability permits, and with the post-secondary sector on clarifying and diversifying their admissions requirements. We will continue our efforts in this regard.
18. In the 2015/16 school year, about 98% of S4 students, 96% of S5 students and 88% of S6 students took two or three elective subjects (Details on 2015/16, see Table 6 of the Annex).
19. In the 2015/16 school year, relatively more students (over 10%) took “Chemistry”, “Economics”, “Biology”, “Business, Accounting and Financial Studies”, “Physics”, “Geography”, “Information and Communication Technology”, “Chinese History” and “History”. Relatively fewer students (less than 1%) took “Integrated Science”, “Technology and Living”, “Music” and “Literature in English” (Details on 2015/16, see Table 1 of the Annex). In general, the pattern of student enrolment was similar in S4, S5 and S6.

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⁸ Proportion of students taking three elective subjects:

- S4 – 2009/10: 51.4%; 2010/11: 45.0%; 2011/12: 41.8%; 2012/13: 35.0%; 2013/14: 32.5%; 2014/15: 29.7%; 2015/16: 29.0%
- S5 – 2010/11: 42.6%; 2011/12: 38.9%; 2012/13: 33.0%; 2013/14: 29.1%; 2014/15: 28.0%; 2015/16: 26.4%
- S6 – 2011/12: 27.7%; 2012/13: 20.1%; 2013/14: 18.3%; 2014/15: 17.0%; 2015/16: 16.9%

2015/16 School Year Survey Results**Table 1: Number and proportion of (a) schools' offering; and (b) students' taking of SS subjects in 2015/16**

SS subject	S4				S5				S6			
	Schools offered		Students enrolled		Schools offered		Students enrolled		Schools offered		Students registered HKDSE	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Chinese Language ¹	446	99.8	57,042	97.8	448	100.0	53,570	98.1	447	99.8	54,940	98.0
English Language	447	100.0	58,320	100.0	448	100.0	54,602	100.0	448	100.0	55,902	99.8
Liberal Studies	447	100.0	58,320	100.0	448	100.0	54,602	100.0	448	100.0	55,907	99.8
Mathematics	447	100.0	58,320	100.0	448	100.0	54,602	100.0	448	100.0	55,908	99.8
Compulsory Part only	134	30.0	48,078	82.4	43	9.6	45,107	82.6	41	9.2	48,143	85.9
Compulsory Part + Module 1	171	38.3	3,652	6.3	247	55.1	3,825	7.0	265	59.2	3,177	5.7
Compulsory Part + Module 2	231	51.7	5,608	9.6	314	70.1	5,670	10.4	313	69.9	4,588	8.2
Compulsory Part + not-yet-specified Extended Part	16	3.6	982	1.7	0	0.0	0	0.0	--	--	--	--
Chinese Literature	149	33.3	2,241	3.8	148	33.0	1,911	3.5	159	35.5	2,047	3.7
Literature in English	33	7.4	580	1.0	29	6.5	367	0.7	28	6.3	380	0.7
Chinese History	385	86.1	7,779	13.3	388	86.6	6,761	12.4	392	87.5	6,219	11.1
Economics	421	94.2	17,093	29.3	423	94.4	15,291	28.0	426	95.1	15,237	27.2
Ethics and Religious Studies	81	18.1	1,248	2.1	79	17.6	856	1.6	79	17.6	668	1.2
Geography	408	91.3	12,149	20.8	414	92.4	10,807	19.8	411	91.7	10,256	18.3
History	311	69.6	7,268	12.5	299	66.7	6,122	11.2	305	68.1	5,813	10.4
Tourism and Hospitality Studies	189	42.3	4,550	7.8	190	42.4	4,265	7.8	186	41.5	3,907	7.0
Biology	432	96.6	16,904	29.0	427	95.3	15,268	28.0	425	94.9	14,548	26.0
Chemistry	422	94.4	17,194	29.5	418	93.3	15,007	27.5	410	91.5	14,067	25.1
Physics	427	95.5	14,042	24.1	424	94.6	12,140	22.2	419	93.5	11,510	20.5
Science: Combined Science	53	11.9	1,062	1.8	64	14.3	1,113	2.0	86	19.2	1,412	2.5
Biology + Chemistry	35	7.8	566	1.0	43	9.6	605	1.1	60	13.4	817	1.5
Chemistry + Physics	26	5.8	441	0.8	31	6.9	430	0.8	43	9.6	506	0.9
Physics + Biology	3	0.7	55	0.1	6	1.3	78	0.1	11	2.5	89	0.2
Science: Integrated Science	10	2.2	150	0.3	12	2.7	161	0.3	12	2.7	164	0.3
Business, Accounting and Financial Studies	408	91.3	14,222	24.4	408	91.1	12,468	22.8	408	91.1	11,593	20.7
Design and Applied Technology	59	13.2	1,068	1.8	62	13.8	928	1.7	58	12.9	698	1.2
Health Management and Social Care	48	10.7	1,083	1.9	51	11.4	973	1.8	46	10.3	865	1.5
Information and Communication Technology	405	90.6	7,920	13.6	402	89.7	6,682	12.2	410	91.5	6,019	10.7
Technology and Living	22	4.9	290	0.5	28	6.3	313	0.6	26	5.8	277	0.5
Food Science & Technology	16	3.6	233	0.4	21	4.7	242	0.4	20	4.5	213	0.4
Fashion, Clothing & Textiles	6	1.3	57	0.1	7	1.6	71	0.1	6	1.3	64	0.1
Music	88	19.7	306	0.5	72	16.1	210	0.4	71	15.8	191	0.3
Visual Arts	353	79.0	5,339	9.2	358	79.9	4,413	8.1	359	80.1	3,750	6.7
Physical Education	99	22.1	1,299	2.2	91	20.3	1,059	1.9	82	18.3	811	1.4
Applied Learning (no. of students) ³	--	--	--	--	313	69.9	4,349	8.0	302	67.4	3,879	6.9
Applied Learning (no. of enrolments) ²	--	--	--	--	313	69.9	4,422	--	302	67.4	3,945	--

Notes

1: Information on other Chinese language curricula (e.g. adapted Chinese Language curriculum for Non-Chinese Speaking students) is not included. Note that two participating schools did not offer the local Chinese Language curriculum (leading to the HKDSE Examination) for S4 and S6 students respectively.

2: Information as at 27 October 2015. Applied Learning Chinese (for non-Chinese speaking students) is not included.

Table 2: Proportion of SS students taking Science subjects in 2015/16

No. of Science Education KLA subjects taken	S4	S5	S6 (HKDSE registration data)
	% of students	% of students	% of students
1	27.15%	25.71%	25.72%
2	21.96%	21.41%	19.68%
3	4.52%	3.83%	3.11%
Total	53.63%	50.95%	48.51%

Table 3: Cross-KLA subject-taking by SS students in 2015/16

No. of KLA(s)	S4	S5	S6 (HKDSE registration data)
	% of students	% of students	% of students
≤ 1	32.48%	34.79%	43.19%
2	60.81%	58.28%	52.81%
3	6.44%	6.88%	3.97%
> 3	0.27%	0.05%	0.03%
Total	100%	100%	100%

Table 4: Number of subject combinations in 2015/16

No. of elective subjects taken ³	S4		S5		S6 (HKDSE registration data)	
	Subject combination		Subject combination		Subject combination	
	No.	%	No.	%	No.	%
1	19	1.61%	22	2.06%	24	2.64%
2	217	18.44%	230	21.58%	231	25.44%
3	663	56.33%	694	65.10%	592	65.20%
> 3	278	23.62%	120	11.26%	61	6.72%
Total	1,177	100%	1,066	100%	908	100%
Average no. of combinations per school	36		41		41	

Note 3: All Applied Learning courses are grouped as a single subject in calculating the subject combination. Applied Learning Chinese (for non-Chinese speaking students) is not included.

Table 5: Top 30 subject combinations taken by SS students in 2015/16

Order	S4			S5			S6 (HKDSE registration data)		
	Subject combination ⁴	Students enrolled		Subject combination ⁴	Students enrolled		Subject combination ⁴	Students enrolled	
		No.	%		No.	%		No.	%
1	BAFS ECON	3,180	5.45%	BAFS ECON	3,117	5.71%	BIO CHEM	3,538	6.31%
2	BIO CHEM	3,159	5.42%	BIO CHEM	3,108	5.69%	BAFS ECON	3,484	6.22%
3	CHEM PHY	2,654	4.55%	CHEM PHY	2,656	4.86%	CHEM PHY	2,852	5.09%
4	BIO CHEM PHY	2,469	4.23%	BIO CHEM PHY	2,066	3.78%	BIO CHEM PHY	1,719	3.07%
5	ECON GEOG	1,243	2.13%	ECON GEOG	1,224	2.24%	ECON GEOG	1,471	2.63%
6	CHI_HIST HIST	1,199	2.06%	BIO GEOG	1,031	1.89%	BIO GEOG	1,126	2.01%
7	BIO CHEM ECON	1,143	1.96%	BIO CHEM ECON	1,004	1.84%	BIO ECON	979	1.75%
8	ICT PHY	1,097	1.88%	CHI_HIST HIST	954	1.75%	GEOG HIST	895	1.60%
9	BIO GEOG	1,071	1.84%	ICT PHY	884	1.62%	ECON PHY	892	1.59%
10	CHEM ECON PHY	992	1.70%	GEOG HIST	870	1.59%	CHI_HIST HIST	875	1.56%
11	GEOG HIST	924	1.58%	BIO ECON	804	1.47%	ICT PHY	829	1.48%
12	CHI_HIST GEOG	792	1.36%	CHI_HIST GEOG	728	1.33%	GEOG	771	1.38%
13	BIO ECON	729	1.25%	CHEM ECON PHY	724	1.33%	BIO CHEM ECON	758	1.35%
14	BAFS ICT	719	1.23%	GEOG THS	711	1.30%	CHI_HIST GEOG	756	1.35%
15	BAFS THS	718	1.23%	BAFS GEOG	707	1.29%	BIO PHY	726	1.30%
16	GEOG THS	703	1.21%	BAFS BIO	681	1.25%	BAFS GEOG	699	1.25%
17	BAFS BIO	690	1.18%	ECON PHY	661	1.21%	ECON HIST	695	1.24%
18	BAFS PHY	667	1.14%	BAFS ICT	625	1.14%	CHEM ECON	690	1.23%
19	ECON PHY	658	1.13%	CHI_HIST ECON	621	1.14%	CHI_HIST ECON	679	1.21%
20	BAFS GEOG	648	1.11%	BAFS PHY	619	1.13%	BIO	664	1.18%
21	BAFS ECON GEOG	618	1.06%	ECON HIST	579	1.06%	ECON	662	1.18%
22	CHI_HIST ECON	573	0.98%	BAFS THS	577	1.06%	CHEM ECON PHY	662	1.18%
23	GEOG PHY	563	0.97%	ECON ICT	519	0.95%	ICT	654	1.17%
24	GEOG ICT	551	0.94%	BIO PHY	505	0.92%	BAFS PHY	646	1.15%
25	BIO CHEM GEOG	549	0.94%	CHI_HIST CHI_LIT	474	0.87%	BAFS ICT	644	1.15%
26	ECON ICT	543	0.93%	BIO CHEM GEOG	455	0.83%	BAFS BIO	635	1.13%
27	BAFS BIO CHEM	526	0.90%	CHEM ECON	443	0.81%	CHI_HIST CHI_LIT	594	1.06%
28	ECON HIST	501	0.86%	GEOG PHY	423	0.77%	BAFS	553	0.99%
29	BAFS CHI_HIST	491	0.84%	BAFS CHI_HIST	416	0.76%	THS	553	0.99%
30	BIO PHY	491	0.84%	BAFS BIO CHEM	413	0.76%	ECON ICT	544	0.97%
	TOTAL:	30,861	52.92%	TOTAL:	28,599	52.38%	TOTAL:	31,245	55.76%

Note 4: All Applied Learning courses are grouped as a single subject in calculating the subject combination. Applied Learning Chinese (for non-Chinese speaking students) is not included.

Remarks:

- BAFS - Business, Accounting and Financial Studies
- BIO - Biology
- CHEM - Chemistry
- CHI_HIST - Chinese History
- CHI_LIT - Chinese Literature
- ECON - Economics
- GEOG - Geography
- HIST - History
- ICT - Information and Communication Technology
- PHY - Physics
- THS - Tourism and Hospitality Studies

Table 6: Number of elective subjects taken by SS students in 2015/16

No. of elective subjects taken	S4 ⁵	S5	S6 (HKDSE registration data)
	% of students	% of students	% of students
< 2	1.00%	3.74%	12.31%
2	68.92%	69.52%	70.66%
3	29.01%	26.41%	16.86%
> 3	1.06%	0.33%	0.16%
Total	100%	100%	100%

Note 5: The EDB encourages schools to offer more SS elective subjects to S4 students to explore their interest, so as to decide on the subjects to be taken in S5 or S6.