Inspection Report

On Focus Inspection

St. Joseph's College

Address of School: 7 Kennedy Road, Hong Kong Inspection Period: 11, 12 and 14 January 2016

Quality Assurance and School-based Support Division Education Bureau

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Contents

1	Insp	pection Methodology	Page 1
2	Learning and Teaching		2
	2.1	Development of the Technology Education Key Learning Area	
	2.2 Learning and Teaching of Computer Subjects of the Technology Education Key Learning Area		
3	Suggestions for Improvement		6

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1. Inspection Methodology

- The focus inspection was conducted on 11, 12 and 14 January 2016 to evaluate the development of the Technology Education Key Learning Area (TEKLA) in the school. The subjects inspected included Computer Literacy as well as Information and Communication Technology.
- The following methods were employed to understand the situation of the school:
 - Observation of 4 lessons taught by 4 Computer teachers;
 - Meetings with the Vice Principal, panel chairpersons and teachers;
 - Scrutiny of documents and information provided by the school;
 - Scrutiny of samples of students' work and examination papers; and
 - Observation of lunch time school activity such as 'C Programming Course' organised by Computer Society.
- The inspection findings presented in this report were derived from the judgment of the inspector based on the information collected through the above-mentioned methods during the inspection period.

2. Learning and Teaching

2.1 Development of the Technology Education Key Learning Area

- There is a progressive development for TEKLA in this boys' school as the school adheres much importance to broadening students' knowledge base in technology education. Computer Literacy (CL) and Business Fundamentals are offered to all S1 to S3 students. Although both Design and Technology (D&T) and Home Economics (H Ec) are not offered to junior secondary students as there were no D&T workshop and H Ec room when the school was first established. It is highly appreciated that the school is proactive in exploring other modes of curriculum implementation for their junior secondary students in TEKLA. The school takes the initiative in arranging S1 and S2 students to have D&T lessons at the Arts and Technology Education Centre (ATEC) during the school's weekly Extra Curricular Activities Sessions. School could consider extend the above opportunities to all junior secondary levels. Liaison with ATEC to admit more students to learn both D&T and H Ec may be explored. In addition, various co-curricular programmes activities such as talks, visits and workshops related to the core learning elements on Food and Nutrition, Operations and Manufacturing under TEKLA may also be organised by tapping external support from related professional organisations and tertiary institutions.
- Information and Communication Technology (ICT) as well as Business, Accounting and Financial Studies (BAFS) are offered as two of the elective subjects under the senior secondary curriculum for S4 to S6 students. Students who opt for BAFS could further choose between Accounting and Business Management Module as their elective part. For students who opt for ICT, two ICT elective modules, namely Data Communications and Networking, Multimedia Production and Web Site Development as well as Software Development are offered to cater for students' varied interests.
- Both Computer and BAFS panels are managed on a subject basis rather than from the TEKLA perspective. Opportunities are provided for students to apply their knowledge and develop their generic skills through life-wide learning activities such as visits and competitions. In facilitating junior secondary students to develop a coherent understanding of the knowledge contexts of TEKLA and apply in a wider context, cross subject collaboration between the two subjects or with other KLAs using theme-based learning tasks or projects is necessary. A TEKLA Coordinator could be assigned to take a leading role in overseeing the development of TEKLA. Reference is to be made to the "Enriched Technology Education Key Learning Area Curriculum Supplementary Notes (Secondary 1-3)" in terms of curriculum planning.

In general, the subjects' annual program plans clearly state the annual development focuses and objectives with relevant tasks and strategies. Some of the strategies such as "Incorporate the use of tablet in junior secondary level" and "Enable students to apply their knowledge in actual situations" are aligned with the school's major concerns. However, there is a need for both subject

panels to strengthen professional sharing within the KLA in terms of good practices in lesson design and pedagogies in addressing the school's major concern on "Empower teachers through enriching professional development". The success criteria need to be focused on the targets of the major concerns rather than the completion of planned tasks. The evaluation could be made on tasks whether the set objectives have been accomplished so as to inform future planning.

2.2 Learning and Teaching of Computer Subjects of the Technology Education Key Learning Area

(Subjects inspected: Computer Literacy, Information and Communication Technology)

(1) Student Performance

- Students are generally willing to learn and are actively engaged in the lessons. Their English proficiency is high and they can communicate fluently with peers and teachers. From the scrutinised assignment and lesson observations, students can grasp the computer concepts and knowledge like Wi-Fi network setup and operation of the application software such as spreadsheet.
- In the past three years, the percentages of students attaining Level 2 or above and Level 4 or above in ICT in the HKDSE Examination were above the territory averages of day school students. Taking into account the S1 intake, the school performed well in ICT in the HKDSE Examination in the past three years.
- Students are interested in participating in activities organised by the school, such as visits, various robotics and programming competitions and programming training courses. Student helpers of the school Web Publishing Board and Computer Society are responsible for the maintenance of school website and organising IT related activities, demonstrating their IT skills and talents. Some students have satisfactory performance in competitions in recent years. They are awarded with prizes in territory- wide software and robotics competitions.

(2) Quality of Learning and Teaching

• The S1-3 teaching schemes suitably cover the core and extension learning elements such as computer systems, computer networks, information processing and presentation as well as programming concepts. However, some topics such as multimedia elements and spreadsheet functions under information processing and presentation are beyond the ability level of junior secondary students. According to the worksheet scrutinised, students cannot grasp the concept of multimedia file formats and spreadsheet financial functions. Teachers need to make reference to the "Enriched Technology Education Key Learning Area Curriculum Supplementary Notes (Secondary 1-3)" and adjust the level of

difficulty of some of the topics by revising the teaching schemes accordingly. In addressing the school's major concern on "Empower learning and teaching via Information Technology", the topic of "mobile devices and Apps" is suitably added in the CL teaching schemes to equip students with the basic skills in using the devices and apply the IT skills in learning. Sufficient lesson time is allocated to the learning and teaching of the ICT curriculum to cover the core topics set out in the CDC curriculum and assessment guide and HKEAA examination syllabus.

- Clear assessment requirements are set out in the school document and panel minutes. For the junior secondary level, assignments in the form of workbook, worksheets and practical tasks are of satisfactory variety in helping students to consolidate their learning. To strengthen students' problem solving skills and higher order thinking skills, some case studies and theme-based tasks are to be given. The evaluations of students' internal and external examination results are not specific enough to facilitate improvement. The evaluations of the assessment results could be further optimised by identifying students' learning difficulties to reflect their learning needs and then reviewing the teaching strategies and curriculum planning accordingly. At the moment, students need to submit some assignments through the school online platform for teachers' review. In line with the related school's major concern, the platform can be more fully utilised. Teachers could upload more self-learning resources such as online learning package and reading materials for students' reference to cultivate their self-learning habit.
- There are 4 experienced teachers in the Computer Panel. Panel members communicate through regular meetings and informal contact to discuss subject issues, teaching progress and students' performance. Through homework and test paper inspections, the panel head keep track of the work of the panel members. As some of the suggestions discussed in panel meetings are not followed in a timely manner by the members. The panel head's monitoring works should be strengthened. Lesson observation, collaborative lesson preparation and professional sharing meetings could be further stepped up to enhance professional exchange on subject knowledge as well as learning and teaching strategies.
- Teachers in general speak English fluently and possess good subject knowledge. Most of them explained the concepts in a clear and concise way. Some of the lessons were with clear learning objectives and teaching contents were built on students' previous learning. Lessons were teacher-centred, lecturing and demonstration being the common teaching strategies. Some of the teachers pointed out students' common mistakes and discussed with them. Teachers walked around to monitor students' progress during the learning activities and provided individual guidance. Teachers could also consider arranging graded tasks or collaborative learning tasks to cater for students' different learning needs.
- In one of the lessons, the learning atmosphere was monotonous. Teacher only went through the teaching notes. The interaction between the teacher and students was minimal. More interactive activities could be arranged to enhance

- students' engagement and keep track of their learning progress. Authentic case studies could be provided to students for discussion and application of knowledge and skills in a meaningful context.
- In a more effective lesson, teacher made good use of questioning skills to provoke students' higher-order thinking. Group discussion and students presentation were suitably arranged to provide opportunities for students to co-construct knowledge and demonstrate their learning. Teacher also made good use of a video clip to consolidate the lesson content. A case study was also provided students to apply their knowledge in which further develops their problem solving skill.

3. Suggestions for Improvement

- In facilitating continuous development of TEKLA, school may consider assigning a TEKLA Coordinator to oversee TEKLA administrative and professional matters. The Corodiantor may also take a leading role to explore additional opportunities for junior secondary students to learn some of the core learning elements under the technology and living knowledge context and the like in ATEC or tapping external resources from professional organisations in enriching students' learning experiences in this area. Cross-subject and cross-KLA collaboration may be strengthened by adopting a theme-based or life experience approach in curriculum planning for students to develop a holistic understanding of technology education in the local context.
- In view of the good learning abilities of students, a student-centred approach
 could be adopted to enhance the effectiveness of learning and teaching.
 Teachers' pedagogical content knowledge could be further enriched for more
 effective scaffolding. A wider range of questions could be asked to provoke
 students' higher-order thinking and facilitate their deep learning.