An Roinn Oideachais
Department of Education

Subject Inspection: Computer Science and digital subjects
Report

REPORT

Ainm na scoile/School name	Kishoge Community College
Seoladh na scoile/School address	Thomas Omer Way Lucan
Uimhir rolla/Roll number	76152C
Dáta na cigireachta/ Date of evaluation	13-12-2022
Dáta eisiúna na tuairisce/Date of issue of report	24/03/2023

What is a subject inspection?

Subject Inspections report on the quality of work in individual curriculum areas within a school. They affirm good practice and make recommendations, where appropriate, to aid the further development of the subject in the school.

How to read this report

During this inspection, the inspector(s) evaluated learning and teaching in Computer Science and digital subjects under the following headings:

1. Teaching, learning and assessment
2. Subject provision and whole-school support
3. Planning and preparation

The board of management of the school was given an opportunity to comment in writing on the findings and recommendations of the report, and the response of the board will be found in the appendix of this report.

Inspectors describe the quality of each of these areas using the Inspectorate's quality continuum which is shown on the final page of this report. The quality continuum provides examples of the language used by inspectors when evaluating and describing the quality of the school's provision in each area.

Actions of the school to safeguard children and prevent and tackle bullying

<table>
<tr><td colspan="2">During the inspection visit, the following checks in relation to the school's child protection and anti-bullying procedures were conducted:</td></tr>
<tr><td>Child Protection</td><td>Anti-bullying</td></tr>
<tr><td>1. The name of the DLP and the Child Safeguarding Statement are prominently displayed near the main entrance to the school.
2. The Child Safeguarding Statement has been ratified by the board and includes an annual review and a risk assessment.
3. All teachers visited reported that they have read the Child Safeguarding Statement and that they are aware of their responsibilities as mandated persons.</td><td>1. The school has developed an anti-bullying policy that meets the requirements of the Anti-Bullying Procedures for Primary and Post-Primary Schools (2013) and this policy is reviewed annually.
2. The board of management minutes record that the principal provides a report to the board at least once a term on the overall number of bullying cases reported (by means of the bullying recording template provided in the Procedures) since the previous report to the board.
3. The school's anti-bullying policy is published on its website and/or is readily accessible to board of management members, teachers, parents and students.</td></tr>
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The school met the requirements in relation to each of the checks above.

Subject inspection

Date of inspection	13-12-2022
Inspection activities undertaken • Review of relevant documents • Discussion with principal and key staff • Interaction with students, including focus groups	• Observation of teaching and learning during four lessons • Examination of students' work • Feedback to principal and relevant staff

School context

Kishoge Community College is a co-educational school operating under the auspices of the Dublin and Dún Laoghaire Education and Training Board (DDLETB). There were 932 students enrolled at the time of the inspection. The school offered the Junior Cycle, an optional Transition Year (TY) programme, the Leaving Certificate Applied (LCA) and the Leaving Certificate (Established).

Summary of main findings and recommendations:

Findings

- Teaching, learning and assessment was good, with some highly effective practices noted.
- Students were encouraged to be organised; effective planning strategies were modelled by the teachers and students structured their code very well.
- Support from management for the courses was very good. The school had developed an alternative coding course for students with previous coding experience to apply their knowledge.
- Management and staff were commendably vigilant about digital safety, with comprehensive strategies in place for the safe and effective use of digital devices.
- Planning and preparation was very good, with detailed plans supported by a bank of digital resources created by the team.

Recommendations

- Teachers should provide students with formative feedback on the written work of the theory elements of the course.
- The department should increase the variety of common software options available in the classroom and encourage their use.

Detailed findings and recommendations

1. Teaching, learning and assessment

- Overall teaching, learning and assessment was good.

- Teachers in all classes displayed good knowledge of the curriculum content. Key concepts were explained and demonstrated clearly. All lessons showed evidence of effective preparation, with supporting slides, handouts and digital activities. Students participated in a wide variety of digital activities such as creation of presentations, planning projects, coding for web design, block-based coding and text-based coding.

- In keeping with good practice, learning intentions were communicated in the majority of lessons. In a few lessons, these were communicated very clearly at the outset and revisited to assess students' learning and affirm understanding. Effective revisiting of learning intentions to assess learning can inform the planning for subsequent lessons; it is recommended that this practice is embedded across the computer science department.

- A good balance in student-centred activities and teacher input was observed in the majority of lessons. In a few lessons, students were facilitated to collaborate highly effectively. In some instances, additional opportunities for active learning and structured collaborative learning would encourage student engagement.

- Most lessons were well-planned and this supported positive learner experiences. In all lessons observed, the interactions between students and teachers were very respectful, promoting a positive learning atmosphere. Excellent practice was observed in one lesson, when students reflected on feedback that they had received from peers; they collated the feedback and used it to improve their own practice. Some students were very well-supported through one-to-one support.

- Teachers modelled effective planning strategies to students. Students demonstrated organisation and responsibility for their work in that regard. Students were encouraged to put comments in all types of code. This is highly commendable as it makes the code more organised and accessible. Screen mirroring software was used very effectively by teachers for live coding demonstrations and maintaining student engagement. This improved learner outcomes, as students could actively engage with the execution of live code being demonstrated.

- Students engaged in activities to predict, test and modify code. Students translated real world concepts into abstract ideas. They were observed using subject specific language effectively during these processes. Teachers modelled good coding practices and affirmed alternative possible solutions to problems.

- Students were encouraged to be creative in their work and to appreciate that their talents and abilities can be developed through challenges. They were reassured that the risk of making mistakes in their work is part of the learning process, building resilience. They were encouraged to re-evaluate their plans, when necessary.

- There was good use of questioning in all lessons. In many lessons, well dispersed questioning enhanced the learner experience and appropriately challenged students. It encouraged independent thinking and increased student participation. Very effective practice was noted in some lessons, when appropriate wait-time was provided and higher-order questioning strategies were used.

- Effective oral feedback was provided by all teachers. The digital platform was used to record feedback on students' assignments. These effective practices should be extended to students' copies, with written formative feedback to guide students' learning.

- Students had excellent opportunities to apply skills learned through theory in their projects and interacting with hardware. It would be valuable to broaden student experiences and promote discussion around alternative software solutions, including exposure to a variety of web browsers and search engines. This would expand student understanding of features that alternatives provide, as well as increasing mobility and discouraging bias.

- Students who participated in the focus group as part of the inspection spoke positively of their experiences with the subjects. They described many achievements in web design, simulations, working with sensors, programming moving objects, and the application of skills outside the classroom. They explained how previous written homework and coding projects were useful to their revision. A few students stated that they very much enjoyed working on physical projects, such as building computers and working with electronic breadboards. They expressed appreciation of the collection of digital resources provided by their teachers, as well as the exercises which strengthened their skills in logical thinking.

2. Subject provision and whole school support

- Subject provision and whole school support was very good.

- Students could take two junior cycle short course modules, Digital Media Literacy and Coding, in combination, as an option. They could alternatively choose *Kishoge Coding+*, which provided differentiation for students who already had experience with coding. *Coding+* allowed students to apply their coding experience to areas such as interface design, art and music.

- In senior cycle, LCA students could avail of the two information and communications technology (ICT) courses: Introduction to ICT, as well as ICT (Vocational Specialism). Computer Science was available as an option to both fifth and sixth-year students. There were two class groups of Computer Science in both fifth and sixth year, making the subject very accessible. Appropriate tuition time was allocated in junior and senior cycle.

- Management monitored student attainment and conducted data analysis of examination attainment data to ensure that students of all levels were achieving.

- The school had two well-resourced computer rooms. It had additional supplies for students to build their applied learning tasks (ALTs) and computer components for students to experience assembling and disassembling computers.

- Staff had engaged extensively with relevant continuing professional development (CPD). Management encouraged CPD and the board of management supported staff CPD with funding. The subject team were collaborative and shared knowledge with all school staff around the area of digital literacy. This was done by running workshops and leading initiatives around digital safety.

- All students had a digital device, which was used effectively in lessons. The school managed digital safety very carefully and included a policy to monitor student devices for non-school activities and content.

- The school had an extensive, well-developed digital learning plan containing key priorities and action plans. Focus areas included leadership and planning of ICT, ICT in the curriculum, e-learning culture and ICT infrastructure.

3. Planning and preparation

- Planning and preparation was very good. The team collaborated well and supported one another very effectively.

- A highly organised bank of resources was shared and developed by the department. These resources were shared on the digital platform and customised by the teachers.

- Subject plans were detailed and very well-developed. A comprehensive overview document set out topics with associated learner outcomes, specification outcomes, and assessment for each week, grouped as modules. The department had developed additional digital files which further described each module within the courses. Each module document included details on learning intentions, learning outcomes and success criteria, with planning evident for differentiated content, cross-curricular links and access to prior knowledge.

- Planning documentation reviewed had evidence of ongoing development; teachers reflected on content after it had been taught, recording their observations for use in the improvement of planning for the following years.

- The subject department formed links with industry partners. Guests had visited to promote Computer Science and the department ran a programme to encourage uptake amongst female students in the school. Students had opportunities to participate in workshops outside the school and engage in a variety of national competitions.

The draft findings and recommendations arising out of this evaluation were discussed with the principal/subject teachers at the conclusion of the evaluation.

The Inspectorate's Quality Continuum

Inspectors describe the quality of provision in the school using the Inspectorate's quality continuum which is shown below. The quality continuum provides examples of the language used by inspectors when evaluating and describing the quality of the school's provision of each area.

Level	Description	Example of descriptive terms
Very Good	*Very good* applies where the quality of the areas evaluated is of a very high standard. The very few areas for improvement that exist do not significantly impact on the overall quality of provision. For some schools in this category the quality of what is evaluated is *outstanding* and provides an example for other schools of exceptionally high standards of provision.	Very good; of a very high quality; very effective practice; highly commendable; very successful; few areas for improvement; notable; of a very high standard. Excellent; outstanding; exceptionally high standard, with very significant strengths; exemplary
Good	*Good* applies where the strengths in the areas evaluated clearly outweigh the areas in need of improvement. The areas requiring improvement impact on the quality of pupils' learning. The school needs to build on its strengths and take action to address the areas identified as requiring improvement in order to achieve a *very good* standard.	Good; good quality; valuable; effective practice; competent; useful; commendable; good standard; some areas for improvement
Satisfactory	*Satisfactory* applies where the quality of provision is adequate. The strengths in what is being evaluated just outweigh the shortcomings. While the shortcomings do not have a significant negative impact they constrain the quality of the learning experiences and should be addressed in order to achieve a better standard.	Satisfactory; adequate; appropriate provision although some possibilities for improvement exist; acceptable level of quality; improvement needed in some areas
Fair	*Fair* applies where, although there are some strengths in the areas evaluated, deficiencies or shortcomings that outweigh those strengths also exist. The school will have to address certain deficiencies without delay in order to ensure that provision is satisfactory or better.	Fair; evident weaknesses that are impacting on pupils' learning; less than satisfactory; experiencing difficulty; must improve in specified areas; action required to improve
Weak	*Weak* applies where there are serious deficiencies in the areas evaluated. Immediate and coordinated whole-school action is required to address the areas of concern. In some cases, the intervention of other agencies may be required to support improvements.	Weak; unsatisfactory; insufficient; ineffective; poor; requiring significant change, development or improvement; experiencing significant difficulties;

Appendix

SCHOOL RESPONSE TO THE REPORT

Submitted by the Board of Management

Area 1 Observations on the content of the inspection report

The Board is very happy with the report.

We believe it affirms the excellent quality of teaching and learning delivered by the computer Science and Coding Department.

Area 2 Follow-up actions planned or undertaken since the completion of the inspection activity to implement the findings and recommendations of the inspection.

1. Teachers will continue to provide high-quality formative feedback on digital artefacts and notes and will ensure students transfer feedback received into copies. Furthermore, additional written feedback will be provided on theory notes.
2. The Department agreed to work towards a greater range of common software options being introduced. Initial focus is on Junior Cycle CBA options this year and a revision of Senior Cycle teaching materials is being undertaken.