# Coding in Action Phase 2

## An Initiative to Support the Junior Cycle Short Course Coding 2019-2021

### Final Report – February 2022

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# About the Authors

**Junior Cycle for Teachers (JCT)** is a school support service, which was established in 2013 to assist schools in implementing their Junior Cycle (JC) programme through the provision of high-quality continuing professional development (CPD) opportunities. The short courses team within JCT was tasked with supporting schools with short courses.

Lero, the Science Foundation Ireland Research Centre for Software, brings together Ireland's leading software researchers, industry partners and experts in the area of computer science and software research in coordinated centres across Ireland. Lero is an internationally recognised centre of excellence in software research, headquartered at the University of Limerick, and involves 12 higher education institutions. This initiative is directly aligned with Lero's Education and Public Engagement Programme, whose goal is to challenge, inform and effectively engage the public, and stakeholders, in the discipline of computing/software.

Dr. Clare McInerney is the Education and Public Engagement Manager in Lero. She has managed Lero's engagement with the Irish Education system, founded the Scratch programme in 2007, and was the initiator of the collaboration between Lero and JCT. In addition to this, Lero was commissioned by the National Council for Curriculum and Assessment (NCCA) to write the specification for the Coding short course in 2014. McInerney was involved with the 'Exploring Coding' initiative and the 'Junior Cycle Coding in Action' initiative.

# Acknowledgement

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# Glossary

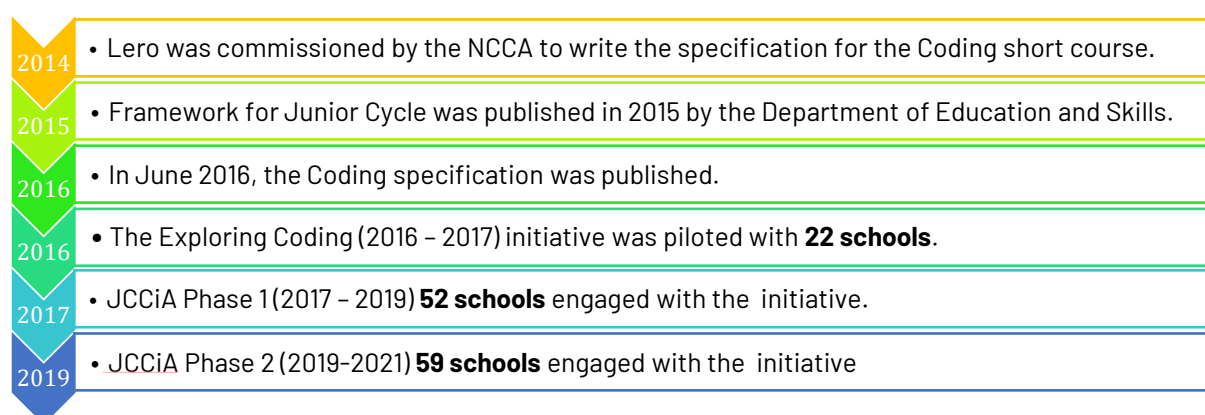CPD            Continuing Professional Development
DEIS          Delivering Equality of Opportunity in Schools
ETB            Education and Training Board
ICT             Information and Communications Technology
JC              Junior Cycle
JCCiA         Junior Cycle Coding in Action
JCT           Junior Cycle for Teachers
PD             Professional Development
PTECH        Pathways in Technology

# 1. Introduction

The Junior Cycle Coding in Action (JCCiA) initiative is a collaborative partnership between Junior Cycle for Teachers (JCT), a support service for schools and teachers, and Lero, the SFI Research Centre for Software. In 2013, JCT was established to assist schools as they began implementing Junior Cycle (JC) reforms. A team was established within JCT dedicated to short courses; this team was tasked with the responsibility of supporting schools with the rollout of the Coding short course.

The partnership between the JCT and Lero began in 2016 when they began collaborating on the pilot project Exploring Coding in 2016 -2017. This was followed by the Junior Cycle Coding in Action Phase 1 (2017-2019) and subsequently followed by the current phase Junior Cycle Coding in Action Phase 2 (2019-2021).

| | |
|---|---|
| **2014** | • Lero was commissioned by the NCCA to write the specification for the Coding short course. |
| **2015** | • Framework for Junior Cycle was published in 2015 by the Department of Education and Skills. |
| **2016** | • In June 2016, the Coding specification was published. |
| **2016** | • The Exploring Coding (2016 – 2017) initiative was piloted with **22 schools**. |
| **2017** | • JCCiA Phase 1 (2017 – 2019) **52 schools** engaged with the initiative. |
| **2019** | • JCCiA Phase 2 (2019-2021) **59 schools** engaged with the initiative |

**Figure 1.** Timeline for Initiatives

## 1.1 Exploring Coding

In late 2015, JCT, Lero and Intel Ireland established a collaborative CPD initiative entitled Exploring Coding. This involved 22 post-primary schools and took place from January 2016 – February 2017. The initiative was designed to:

- examine the current provision and opportunities within schools for Information and Communications Technology (ICT) - related curriculum components at Junior Cycle

- support and document the experiences of a small number of schools as they incorporate aspects of the short course in Coding within their junior cycle programme
- explore further options to support schools and teachers in their implementation of the short course in Coding

Participating schools received a donation from Intel Ireland to support their work. This donation comprised of a set of electronic devices or development boards known as Galileo Gen 24, as well as several component kits.

There was a significant demand to participate in the programme. A total of 128 schools expressed an interest to participate. The CPD programme consisted of

- A regional introductory event
- Four core CPD days
- One industry event
- A  school visit

A final report for the Exploring Coding initiative is available here Exploring Coding – a CPD initiative to support the introduction of the junior cycle short course in Coding. Following the 'Exploring Coding' initiative, a new Phase of CPD followed: 'Coding In Action' Phase 1.

## 1.2  Coding in Action Phase 1

Following on from the success of the Exploring Coding pilot programme, JCT, Lero and industry partners established a collaborative CPD initiative entitled the Junior Cycle Coding in Action (JCCiA) Phase 1 which took place between September 2017 and June 2019.

There was significant demand to participate in the programme, with almost 200 applicants. From this cohort, 52 schools were selected to take part in JCCiA Phase 1.The CPD programme consisted of

- Six core CPD days
- Elective industry events
- Online resources and webinars

- School visits

The experiences of teachers and schools are documented in [Coding in Action-An initiative to support the Junior Cycle short course Coding 2017-2019](#). Following the Coding in Action Phase 1, a new initiative Coding in Action Phase 2 commenced in September 2019. This report shares the findings for this initiative.

## 1.3 The Application Process for JCCiA Phase 2

In Spring 2019, schools were invited to complete an expression of interest to participate in JCCiA Phase 2, with a closing date of March 8th, 2019. This initiative was designed to support schools that were committed to introducing the Coding short course within their JC programme. There was an extensive application process with strict criteria for participation. The initiative was available to all schools. During the application process, schools were required to commit to the introduction of a new JC Coding short course. Schools also needed to demonstrate:

- sufficient timetable allocation to introduce the short course,
- existing practice in terms of Coding/Computer Science at JC level,
- the existence of relevant teacher expertise in the learning area of Coding,
- the ability to nominate two teachers to engage in the initiative.

In total, 81 schools expressed interest in joining phase 2, and 59 schools were selected to participate. The school selection process was an arduous task that was conducted with the utmost care and without prejudice towards any particular type, or location, of a school. This diversity of applicants was reflected in a variety of successful participants.

## 1.4  Observations from Applicants

The 59 selected schools represented a mixture of Community and Comprehensive, Secondary, and Education and Training Board (ETB) schools from across the country as outlined  in Table 1.

**Table 1.** School breakdown by sector

| Type of School | Community and Comprehensive | ETB Schools | Voluntary Secondary schools | DEIS status |
|---|---|---|---|---|
| Number (%) | 6 (10%) | 22 (37%) | 31 (54%) | 17 (28%) |

Three PTECH schools were offered the opportunity to participate on JCCiA Phase 2 and two PTECH actively participated.

There was an almost even split between male and female teachers who were nominated to spearhead the JCCiA Phase 2 initiative within their schools, with 47% of applicants female and 53% male. In terms of the gender breakdown of participating schools, 14% of schools are all-girls schools and 22% of schools are all-boys schools, see Table 2.

**Table 2.** School breakdown by gender

| All Female Schools | All Male Schools |
|---|---|
| 8 (14%) | 13 (22%) |

The teachers had a wide breadth of experience and knowledge and came from a variety of subject disciplines. In particular, as depicted in Table 3, 80% of teachers had over five years of teaching experience. 18% of teachers had worked in the IT industry.

**Table 3.** Teaching experience expressed as the number of years teaching

| No. Years Teaching | 0-2 | 3-5 | 6-10 | 11-15 | 16-20 | 20+ |
|---|---|---|---|---|---|---|
| % | 4 | 17 | 36 | 17 | 12 | 14 |

In terms of the most popular subject areas in which teachers had experience, 45% of teachers were Mathematics teachers, followed by 40% ICT teachers. The next highest saw Science and Technical Graphics making up 17% of the teachers. See Table 3.

**Table 3.** Subjects taught.

| Subject | % |
|---|---|
| Mathematics | 45 |
| ICT | 40 |
| Science | 17 |
| Technical Graphics | 17 |
| Business Studies | 15 |
| Materials Technology (Wood) | 13 |
| History | 12 |

## 1.5 Existing Practice

Teachers were asked about the existing practice in their schools and which students were undertaking the short course. Figure 2 indicates the percentage of cohorts undertaking the short course in Coding in first year, second year and third year. It is noteworthy that the greatest uptake is planned for first year groups starting in October 2019.

**In your school, which cohorts of students are undertaking the short course in Coding (100 hours of curricular time) within their JC programme?**

| | Current First Years | Current Second Years | Current Third Years | First years who will enter next September |
|---|---|---|---|---|
| Yes | 48% | 33% | 19% | 68% |
| No | 52% | 67% | 81% | 32% |
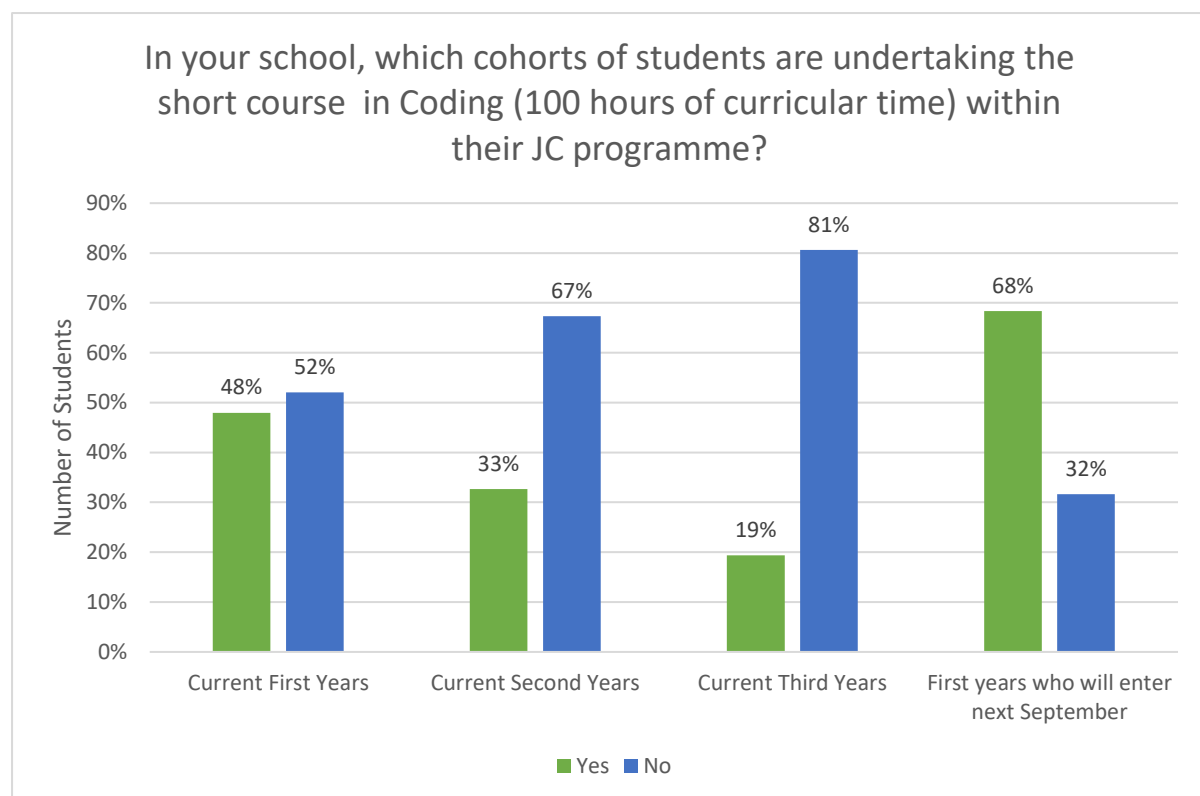
**Figure 2.** Cohorts of students undertaking the short course

We also asked teachers to select from numerical ranges of 10-30, 30-60, 90-120, 150-180 and 180-210 how many students are engaging in Coding in their school. As we can see from Figure 3, first year groups represent the greatest number of students engaging in Coding. It is great to see that 5 out of 59 schools, or 8% of post-primary schools, are offering Coding to cohorts of students greater than 150. Also, if we calculate the average
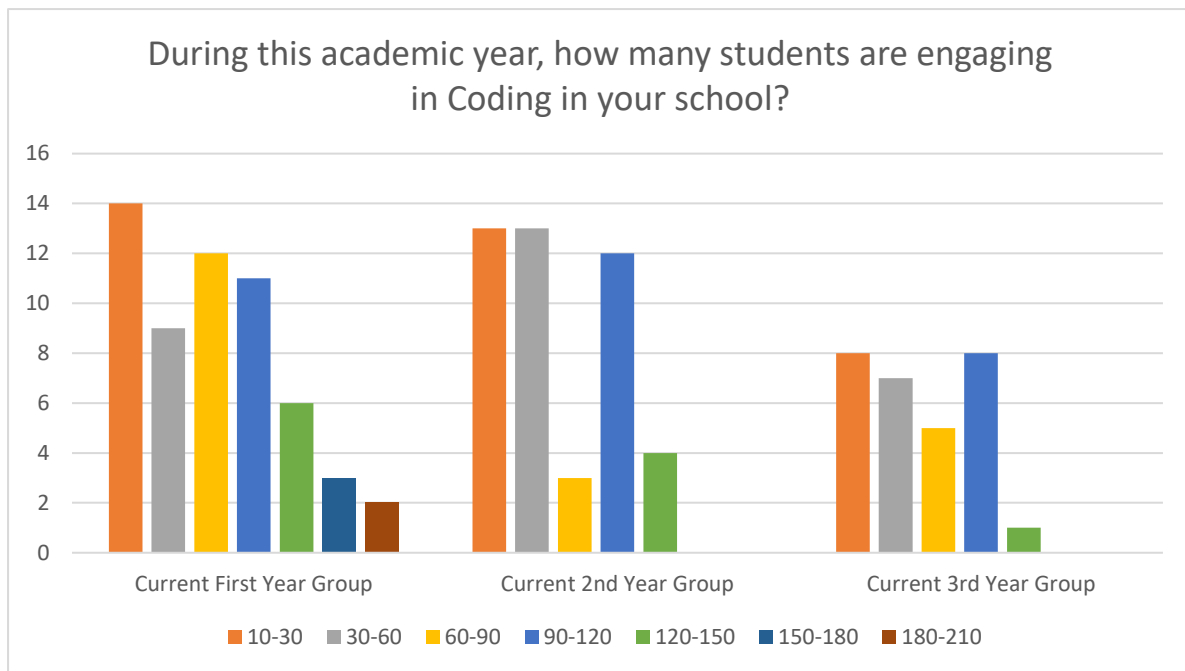
**Figure 3.** The numbers of students engaging with Coding

of each number range, then student engagement numbers are close to 9,000 students across 59 schools.

In terms of gender breakdown of the students, there is a breakdown of 50% male and 50% female for 40% of students.(Figure 4). This is a very positive indicator when we
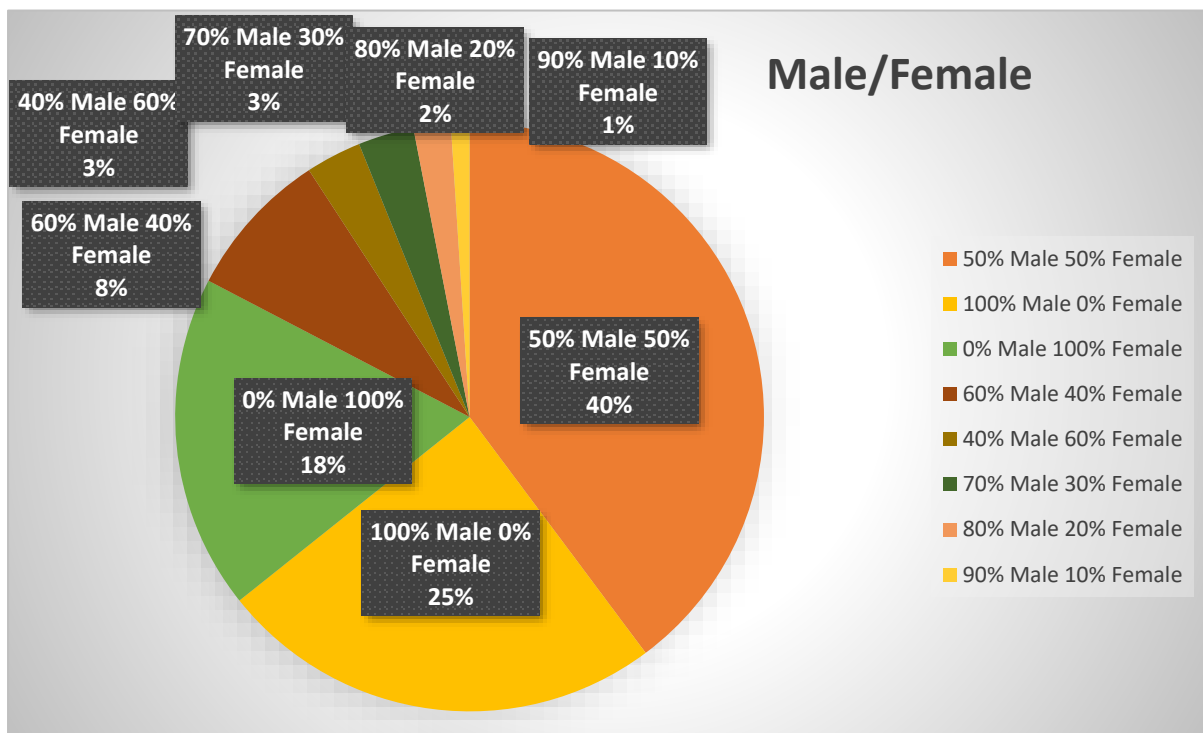


**Figure 4.** Male/Female breakdown

consider that the percentage of female participation in third-level computing undergraduate programmes hovers around 15%. All male-only students account for 25% of students, and this is balanced by all-female only students of 18%. These numbers are not surprising considering that for the participating schools - 14% are all-girls and 22% are all-boys schools.

In terms of the number of active members of the short course in Coding department in the school, Figure 5 indicates that only 14% of schools have one teacher, and 55% of schools have at least two teachers. Furthermore, 31% of schools have three or more teachers in the Coding department in their school.
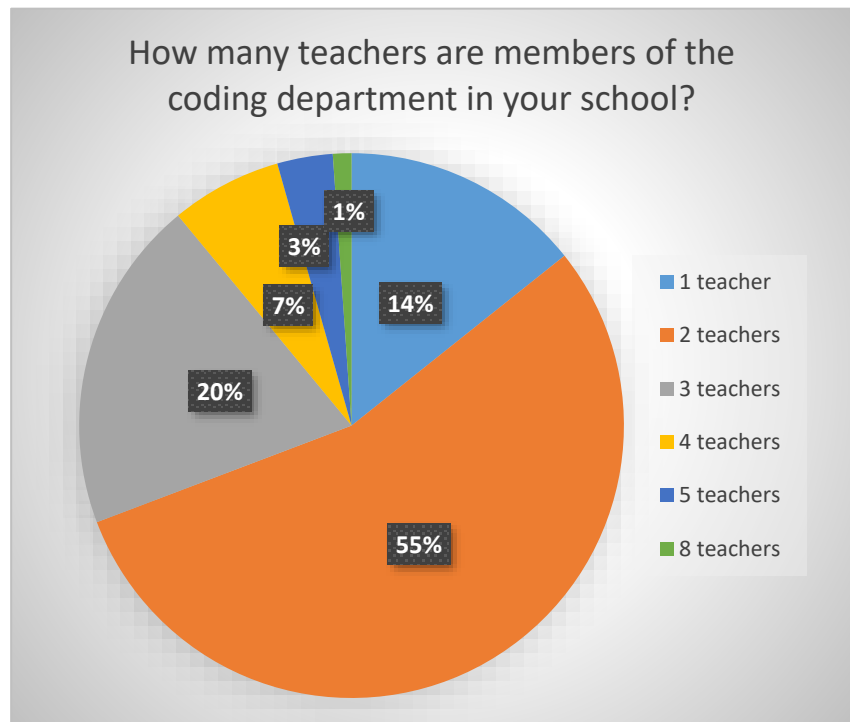


**Figure 5.** % number of teachers in coding departments

With respect to the percentage of schools that had previously offered the short course in Coding, only 16% had offered it previously. This is an indicator that the majority of schools were new schools interested in providing the Short Course in Coding in their schools.

# 2 Overview of JCCiA Phase 2

The following section outlines details of the CPD programme content and timeline of events, cluster days, elective days and school visits.

## 2.1 CPD Programme Overview

Table 3 outlines the programme content and timeline of events that took place over two years. CPD events 4-6 took place online due to the COVID pandemic.

**Table 3.** Schedule of events for the CPD programme

| | |
|---|---|
| **CPD Day 1 – October 2019 (Full Day)** | |
| Session 1 Introduction & Overview | Curriculum Overview |
| Session 2 Planning & Pedagogical Approaches | Intro. to Learning Outcomes, Developing Lesson Plans Learning Outcomes 1.4, 1.5 – Algorithms |
| Session 3 Skills Development | HTML (Setting up a portfolio) |
| **CPD Day 2 – November 2019 (Full Day)** | |
| Session 1 Pedagogical Principles | Formative Assessment, Reflective Practice |
| Session 2 Skills Development - Scratch | Scratch Coding - Drawing Shapes and Loops. Learning Outcomes 1.5, 1.6, 1.7, 1.8, 3.3 |
| Session 3 Skills Development - Python | Python Turtle Graphics Learning Outcomes 1.6, 1.7, 3.5 |
| Industry Workshop 1 - January 2020 (Full Day) | |
| **CPD Day 3 – February 2020 (Full Day)** | |
| Session 1 Skills Development - Unplugged | Bits and Bytes 2.5, 2.6 |
| Session 2 Skills Development – Scratch | Game Design Learning Outcomes 1.5, 1.6, 1.7, 3.5 |
| Session 3 Assessment Practice | Assessment Group Exercise |
| Industry Workshop 2 - March 2020 (cancelled) | |
| **CPD Event 4 – November – December 2020 (2 x 1.5 hour Online Workshops)** | |
| Session 1 Planning and Pedagogical Principals | Sharing of Practice |
| Session 2 Pedagogical Principles & Skills Development | Formative Assessment & Binary to Decimal Conversion Learning Outcomes 1.5, 1.6, 2.5, 3.1, 3.5 |
| **CPD Event 6 - February – March 2021 (2 x 1.5 hour Online Workshops)** | |
| Session 1 Skills Development | HTML e-Portfolio Development Learning Outcomes 2.1, 2.2, 2.3, 2.4 |
| Session 2 Pedagogical Principles | Classroom Based Assessment Real World Problems Learning Outcomes 2.7, 2.8, 2.9, 2.10 |
| **CPD Event 6 – May 2021 (Online)** | |
| Final Online Showcase Event and Presentation of Certificates to Teachers and Schools | |

## 2.2 Cluster Days

The CPD cluster days were designed with a clear focus and the goals of introducing teachers to the programme, facilitating a sharing of practice and offering an opportunity for networking. These days also enabled teachers to engage in discussions around the core issues of planning for teaching and learning outcomes and designing units of learning.

The cluster days took place in various regional centres across the country. The JCCiA schools were asked to attend at their nearest CPD venues. These were spread across the country to ensure that teachers did not have to travel further than necessary. These events took place in Education Centres Navan, Cork, Sligo, Kilkenny and Dublin West and in Lero at the University of Limerick.

## 2.3 Elective Days

Another element of the CPD which teachers were offered were elective CPD events. A series of elective days were held around the country by industry partners.

Microsoft ran an elective event for teachers in January 2019. The event was designed to introduce to teachers a range of Coding supports designed by Microsoft. During this event, teachers engaged with Kinect, Microbits and Minecraft. This event took place in Microsoft Ireland in Sandyford, Dublin. JCT and the teachers involved expressed their thanks to Microsoft for their enthusiasm, work and support throughout the day. The teachers who attended the Microsoft elective day were gifted a set of Microbits.

## 2.4 School Visits

In December 2019 and Spring 2020, a subset of the schools that were taking part in the JCCiA Phase 2 programme was visited by members of the JCT short courses team. The visits were conducted to discover what progress was being made within the schools. The school visits were designed to provide support to teachers and school management in schools enrolled in the JCCiA Phase 2 programme. As evident in Figure 7, the schools enrolled in the JCCiA initiative were spread out across a vast geographical area. During these visits, feedback was gathered and shared with the CPD team.

**Figure 7.** Map of participating schools.

# 3 Impact of JCCiA Phase 2

A final survey was conducted at the end of years one and two of JCCiA Phase 2. Teachers were asked about their experiences of implementing the Junior Cycle Short Course in Coding into their schools.

## 3.1 Changes to Teaching Approaches

Teachers were asked if their teaching approach had changed as a result of engaging in the Junior Cycle Coding in Action Initiative. After one year, 84% of teachers said yes. After two years, and on completion of the programme, 89% of teachers said yes that their teaching approach had changed. When asked to elaborate on what way their teacher approach had changed, a qualitative analysis of all responses highlighted some common themes. These were resources, confidence, teaching strategies and specification knowledge.

For example, 63% of teachers mentioned resources in terms of having access to new or more resources for teaching as exemplified by these responses:

*"It has broadened my knowledge of different platforms which are available" (T11)*

*"Gave me a broader range of examples." (T21)*

22% of teachers mentioned confidence and how they have become more confident in their teaching approaches as exemplified by these responses:

*"I have become more confident, have learned of new tools and resources which get my students more engaged and active" (T13)*

*"My confidence has grown so much, all of the events have been so worthwhile and I have learned so much." (T28)*

Other themes that emerged were references to adopting different teaching strategies (19%) as reflected in the quotes below:

> *"More directed/focused on key areas, before the CPD, I was spreading a thin layer across all aspects" (T2)*

> *"I have used ideas and methods that I have seen on CPD days as this subject is all new to me so taking any information/ideas I can get and putting it into action in the classroom is how I have gone about delivering the subject." (T35)*

A number of teachers (16%) responded that their knowledge of the specification had increased, for example

> *"My understanding of the course and knowledge of how I can challenge the lads during the classes has increased." (T6)*

> *"I'm very new to the Coding short course so I learned loads from the workshops." (T8)*

## 3.2  Impact on Student Learning

Teachers were asked at two different intervals during the CPD programme if participation in this initiative impacted student learning in their coding classes. After one year, 85% said yes. After two years and on completion of the programme, 86% of teachers said yes that participation in the initiative had impacted student learning in their coding classes. On analysis of their responses, several common themes on how participation impacted students learning emerged. These were resources, teaching strategies, student interest or engagement, student learning and confidence.

For example, 29% of teachers mentioned resources in terms of having access to new or more resources for teaching as exemplified by these responses:

> *"I have more subject knowledge, more confident in teaching the subject. It was good to hear what other teachers are doing …. the resources from the CPD has helped greatly" (T18)*

> *"Can use resources I have become aware of" (T20)*

Other themes that emerged were references to adopting different teaching strategies (29%) as reflected in the quotes below:

> *"I try to implement 2 new teaching strategies/resources from each CPD and these are more engaging for the students" (T31)*

> *"I'm able to use new ideas in the class" (T10)*

19% of teachers mentioned student interest or engagement in the short course and 16% of teachers refer to student learning. For example one teacher talked about the relevance of the materials enabling student learning:

> *"I feel that I am delivering more exciting and relevant lessons which in turn has allowed students to learn more." (T28)*

And another acknowledges the students' interest in the subject:

> *"The activities given in the course are much more interesting and engaging for students." (T16)*

And

> *"They have engaged in more exciting experiences." (T8)*

## 3.3 Success and Challenges of JCCiA Phase 2

Teachers were asked about their most significant success and challenges at both a school and a classroom level since they began JCCiA Phase 2. The responses to these questions were varied. However, themes emerged within the answers, and these will be discussed below.

### 3.3.1 Successes of JCCiA Phase 2

**Student interest and engagement** in the JC Coding short course were reported to be very high. 58% of teachers referenced the positive student interest in Coding directly as the key success of JCCiA Phase 2. Several teachers responded about the popularity of the subject and how it was the preferred choice for students with one teacher stating:

*"We are up to 4 classes in the 2nd year short course in coding. It was the most popular choice of the 3 short courses for 2 years last several years." (T3)*

The opportunity that the Short Course in Coding is providing to students, that may not have realised their interest in coding, is clear in this teacher's comment:

*"students who may not have realised they are good at coding and like coding have been given an opportunity to get into it" (T13)*

One teacher noted a broader increased interest in problem-solving:

*"Students have become so much more interested in coding, in how computers work and in problem solving" (T28)*

Participation in the Junior Cycle Coding in Action Phase 2 has increased the **capacity for Computing/Computer Science** in schools at a school level (25%) and at a classroom level (29%). At the school level teachers responded that new computer classrooms were being invested in and one school mentioned introducing the Leaving Certificate Computer Science subject. One teacher commented on the profile of coding:

*"The profile of coding has been raised" (T27)*

Teachers also responded that **student learning and skills development** was a success since introducing the Short Course in Coding. Some teachers highlighted "improvement in ICT skills". One teacher, in particular, referenced how the Short Course in Coding helped online learning during school closures:

*"It has greatly helped 1st year students with online learning during the school closures as they are more computer literate." (T35)*

Teacher responses referred to students' acquisition of skills to enable them to use their skills in other subjects by "making google sites for CBAs" and to participate in broader technology initiatives, for example:

*"Organising a games fair between schools in our ETB" (T28)*

The success experienced by teachers is embodied by this comment by one teacher:

*"Students really enjoy the subject. The interaction between students and teacher is different to other subjects. They really enjoy the subject and therefore, show great respect." (T24)*

### 3.3.2 Challenges of JCCiA Phase 2

Teachers were asked about their most significant challenges at both a school and a classroom level since they began JCCiA Phase 2. 24% of teachers at school level and 13% of teachers at classroom level cited **Timetable** as one of the most significant challenges. Timetabling issues included things like allocation of classes to Coding over ~~the course of the~~ three years. When asked about timetable challenges, one teacher:

*"Time!! A double lesson in second and third year, I feel it should be introduced in first year" (T18)*

Teachers also referred to the tension between short courses and full subjects and that it can be difficult...

*"to defend its position as it's not a full subject" (T25)*

Another challenge teachers faced was **Technology/Access to Technology** which was a challenge at the school level (21%) and classroom level (17%). This encompassed a mix of the challenge of access to and maintenance of computer rooms and equipment. For example, one teacher specifically referred to funding for equipment:

*"Funding for equipment. Provision of equipment for each class group." (T35)*

Several teachers responded about the lack of access at all times to the computer room:

*"Not having access to computers/ resources at all times" (T22)*

*"Not always being in a computer room when in school - only in computer room 1 out of every 3 classes" (T20)*

Of course, an unforeseen challenge was the **Remote Teaching** aspect with teachers highlighting this as a challenge at the school level (18%) and a classroom level (23%). This challenge included students not only not having access to technology or devices from home but also:

*"Students lacking capabilities to work from home" (T13)*

Another challenge theme that emerged at the classroom level was **Differentiation** (17%) with teachers challenged by the different levels of ability in the class. One teacher expanded on the challenges of differentiation as follows:

*"Getting notes together and differentiation of material" (T24)*

Another teacher responded that one of his/her challenges was:

*"Trying to make sure that all students are reaching the desired level." (T23)*

# 4 Conclusion

As the role of software becomes more important in our daily lives, we need to adapt and grow our skill sets to be prepared for the challenges and advantages which these technologies present. The Irish education system is responding to these needs and following the publication of a computing curriculum, the Short Course in Coding, in 2014, the Exploring Coding and JCCiA initiatives (2016-2021) were designed to support schools and teachers in their introduction of the JC Coding short course. Students and teachers were asked to engage with innovative coding-related resources, develop their expertise and to share their experiences.

In conclusion of the JCCiA Phase 2, the initiative has impacted approximately 9,000 students across 59 schools. We know that for 40% of the participating students there is a gender breakdown of 50% male/50% female and that 18% of participating students are female leading to an approximate participation rate of 38% by female students which is really positive considering female enrollment in all third-level ICT programmes ranges between 14% and 20% over a twelve-year period. 55% of schools have at least two teachers in their Coding team, indicating the establishment of coding departments within schools, allowing teachers to share knowledge and resources for the Short Course in Coding.

The impact of the Junior Cycle Coding in Action Initiative Phase 2 is evident in teachers' responses when asked if their teaching approach has changed because of the initiative with 84% (end of Year 1) and 87% (end of Year 2) agreeing it had. Teachers also responded positively that the initiative had impacted student learning in their coding classes with 85% (end of Year 1) and 86% (end of Year 2) responding positively.

It is clear from teachers' responses that student interest and engagement in Coding is a success for schools in the classroom and the rollout of the short course continues to meet the needs and interests of students. The short course is also leading to the establishment of Computing/Computer Science capacity in schools through development of capability and the establishment of coding departments.

Following the second phase of JCCiA, there is now a clear plan in place for the next phase of the initiative. A series of online electives are currently being made available to schools and teachers by JCT and JCT associates for the academic year 2021-2022.

# 5 Appendices

# Appendix 1 – Letter to Schools
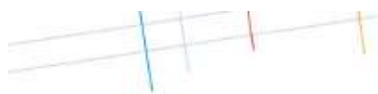
An tSraith Shóisearach do Mhúinteoirí

**Junior CYCLE**
for teachers

Monaghan Education Centre
Knockaconny, Armagh Road
Monaghan, Co. Monaghan

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Dear Principal

Junior Cycle for Teachers (JCT), a Department of Education and Skills schools' support service, continues to provide high quality professional development opportunities for schools and teachers in the context of the implementation of the *Framework for Junior Cycle* (2015).

In 2015, we commenced a CPD initiative called *Exploring Coding* with 22 schools. This proved to be very successful in supporting these schools in their initial work with the new short course in Coding.
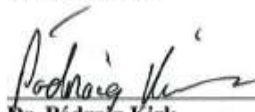
Building on the success of our Exploring Coding project, in 2017 we launched a new two-year initiative, entitled *Junior Cycle: Coding in Action*. This initiative, involving 50 schools, was designed to support schools committed to introducing the short course in Coding into their Junior Cycle programme.

We are now implementing Phase 2 of our *Junior Cycle: Coding in Action initiative and in this regard JCT* now invites schools to express their interest in participating in the new two-year initiative (2019/2020 and 2020/2021). We are delighted to have Lero – The Irish Software Research Centre – continuing to collaborate with us on this innovative initiative.

There is a limit to the number of schools that can engage in this initiative. In order to participate, a school must complete an online 'Expression of Interest' form and provide details of two teachers that will engage in the initiative. The expression of interest form can be accessed through the JCT registration portal. Deadline for applications is **4.00pm on Friday 8<sup>th</sup> March 2019**.

Further details on the initiative are included in the attached information leaflet. Queries can be emailed to **info@jct.ie**.

Yours sincerely

**Dr. Pádraig Kirk**
**Director, CPD for Junior Cycle**

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# Appendix 2 – Brochure

**Indicative Timeline for Year 1**

| | |
|---|---|
| *January 2019* | Schools are informed regarding expression of interest process. |
| *March 8th 2019* | Closing date for schools to express interest in participating. |
| *Early October 2019* | **CPD Event 1** – Short Course Coding – First Steps.<br><br>This full-day event will take place on a regional basis. Substitution will be provided for participating teachers. |
| *Late November 2019* | **CPD Event 2** – Coding – Developing quality learning experiences using learning outcomes.<br><br>This full-day event will take place on a regional basis. Substitution will be provided for participating teachers. |
| *January 2020* | **Elective Event** – Supporting student learning using electronic devices.<br><br>This elective event will take place on a regional basis. |
| *Late February 2020* | **CPD Event 3** – Classroom strategies to support student learning in Coding.<br><br>This full-day event will take place on a regional basis. Substitution will be provided for participating teachers. |
| *April 2020* | **School Visit** – Progress within our School.<br><br>This school visit from a member of the Junior Cycle Coding in Action team will support teachers and school management. |
| *October 2019-May 2020* | **Ongoing Online CPD Support.** |

# Junior Cycle Coding in Action
## Phase 2
### 2019/2020 – 2020/2021

**An tSraith Shóisearach**
**Junior CYCLE**

**Short Course Coding**
Specification for Junior Cycle

*A CPD initiative to support schools in implementing Short Course Coding for the period 2019-2021*

An tSraith Shóisearach do Mhúinteoirí
**Junior CYCLE** for teachers

**Lero**

## Introduction

This collaborative initiative is designed to support schools and teachers in their introduction of Short Course Coding at Junior Cycle.

Students and teachers will engage with innovative Coding-related resources, develop their expertise and share their experiences. The initiative is supported by Lero – The Irish Software Research Centre along with industry partners such as Apple, Google, Intel and Microsoft.

Teachers will:
- Participate in a two-year programme of CPD, involving six core CPD events.
- Have access to various elective CPD events.
- Contribute to an online community of participating teachers.
- Share their experiences with the JCT short courses team, thereby informing the development of further supports for teachers.

## Aims

This initiative seeks to:
- support schools and teachers in their implementation of the short course.
- further develop resources to support schools and teachers.
- capture the experiences of teachers and students during their implementation of the short course in their schools.

## Application Process and Criteria for Participation

The initiative is open to schools that are committed to introducing and developing Short Course Coding in their Junior Cycle programme.

These schools will need to demonstrate:
- sufficient timetable allocation to introduce the short course.
- existing practice in terms of Coding/Computer Science at Junior Cycle level.
- existence of relevant teacher expertise in the learning area of Coding.

Each school will nominate two teachers to engage in the initiative.

In order to apply, a school must complete an online 'Expression of Interest' form and provide details of the two teachers that will engage in the initiative. The online form can be found at www.jctregristration.ie . The closing date for expressions of interest is **4.00pm on Friday 15th February.**

# Junior Cycle Coding in Action

## A collaborative initiative involving

An tSraith Shóisearach do Mhúinteoirí

Junior**CYCLE**
for teachers

Lero

## For further information email:

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Or
**JCCiA Advisor John Kilgannon**
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**Junior Cycle for Teachers (JCT) Support Service**
A Department of Education & Skills Schools' Support Service

| Administrative Office: | Director's Office: |
|---|---|
| Monaghan Education Centre | LMETB |
| Armagh Road | Chapel Street, Dundalk |
| Monaghan Tel.: | Tel.: |
| 047 74008 | 042 9364603 |

Supported by

Google   (intel)   Microsoft

## Appendix 3 – List of JCCiA Phase 2 Schools

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|---|---|
| *Coláiste Bhréanainn* | Cill Airne, Kerry, Co. Kerry |
| *Coláiste Na Toirbhirte* | Ard Aoibhinn, Bandon, Co. Cork |
| *Scoil Mhuire Gan Smál* | Blarney, Co. Cork |
| *Coláiste An Spioraid Naoimh* | Bishopstown, Cork, Co. Cork |
| *Regina Mundi College* | Douglas Road, Cork, Cork, Co. Cork |
| *Killarney Community College* | New Road, Killarney, Co. Kerry |
| *Cobh Community College* | Carrignafoy, Cobh, Co. Cork, |
| *Carrigtwohill Community College* | Foto Business Park (Unit A2), Carrigtwohill, Cork, Co. Cork |
| *Kinsale Community School* | Kinsale, Co.Cork, Co. Cork |
| *Skibbereen Community School* | Gortnaclohy, Skibbereen, Co Cork, Co. Cork |
| *Dominican College* | Sion Hill, Blackrock, Dublin 1, Co. Dublin |
| *St. Joseph Of Cluny* | Ballinclea Road, Killiney, Co. Dublin |
| *Coláiste Phádraig C.B.S.* | Roselawn, Lucan, Co. Dublin |
| *St. Raphaela's Secondary School* | Upper Kilmacud Road, Stillorgan, Stillorgan, Co. Dublin |
| *Presentation Secondary School Warrenmount* | Clarence Mangan Road, Warrenmount, Dublin 8, Co. Dublin |
| *St. Kevin's College CDETB* | Clogher Road, Crumlin, Dublin 12 12, Co. Dublin |
| *St. Conleth's Community College* | Station Road, Newbridge, Co. Kildare |
| *Donabate Community College* | Donabate, Donabate, Co. Dublin |
| *Cabinteely Community School* | Johnstown Road, Cabinteely 18, Co. Dublin |
| *Presentation College* | Askea, Carlow, Co. Carlow |
| *Meánscoil Iognáid Ris* | Naas, Naas, Co. Kildare |
| *St. Mary's C.B.S.* | Mill Park Road, Enniscorthy, Co. Wexford |
| *St. Augustine's College* | Abbeyside, Dungarvan, Dungarvan, Co. Waterford |
| *De La Salle College* | Newtown, Waterford, Co. Waterford |
| *Coliste Aindriú Muine Bheag* | Muine Bheag, Muine Bheag, Co. Carlow |
| *Grennan College* | Ladywell, Thomastown, Thomastown, Co. Kilkenny |
| *Enniscorthy Vocational College* | Milehouse Road, Enniscorthy, Co. Wexford |
| *St. Patrick's Secondary School* | Castleisland, Kerry, Co. Kerry |
| *Presentation Secondary School* | Tralee, Kerry, Co. Kerry |
| *Coláiste Muire* | College Road, Ennis, Ennis, Co. Clare |
| *St. Mary's College* | St. Mary's Road, Galway,  Co. Galway |
| *Scoil Mhuire And Ide* | Newcastle West, Limerick, Newcastlewest, Co. Limerick |
| *St. Clement's College* | Laurel Hill Avenue, South Circular Road, Limerick, Co. Limerick |
| *Mercy Secondary School* | Mounthawk, Tralee, Co. Kerry |

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|---|---|
| *Ennistymon Vocational School* | Ennistymon, Ennistymon, Co. Clare |
| *St. Brigid's College,* | Masonbrook, Loughrea, Co. Galway |
| *Borrisokane Community College* | Ballyhaden, Borrisokane, Co. Tipperary |
| *St. Caimin's Community School* | Tullyvarraga, Shannon, Shannon, Co. Clare |
| *Kilrush Community School* | Kilrush, Kilrush, Co. Clare |
| *St. Josephs CBS Fairview* | Merville Ave Fairview Dublin 3 ,Dublin City |
| *Coláiste Mhuire* | Mullingar, Mullingar, Co. Westmeath |
| *St. Vincent's Secondary School* | Seatown Place, Dundalk, Co. Louth |
| *St. Macartan's College* | Monaghan, Monaghan, Co. Monaghan |
| *Ó Fiaich College* | Dublin Road, Dundalk, Co. Louth |
| *St Peters College Dunboyne* | Station Road, Dunboyne, Co. Meath |
| *Inver College* | Carrickmacross, Carrickmacross, Co. Monaghan |
| *Castleblayney College* | Castleblayney, Co Monaghan, Castleblayney, Co. Monaghan |
| *Larkin Community College* | Champions Avenue, Cathal Brugha Street Dublin 1 |
| *Coláiste Pobail Setanta* | Phibblestown, Clonee, Dublin 15, Co. Dublin |
| *Lusk Community College* | Rathmore Road, Raheny Lane, Lusk, Co. Dublin |
| *Scoil Mhuire Secondary School* | Buncrana, Buncrana, Co. Donegal |
| *Balla Secondary School* | Balla, Castlebar, Castlebar, Co. Mayo |
| *St. Gerald's College* | Newport Road, Castlebar, Castlebar, Co. Mayo |
| *Rice College* | Westport, Westport, Westport, Co. Mayo |
| *Mercy College* | Chapel Hill, Sligo, Sligo, Co. Sligo |
| *Coláiste Chiaráin* | Summerhill, Athlone, Co. Roscommon |
| *Deele College* | Meeting Street, Raphoe, Co. Donegal |
| *Carrigallen Vocational School* | Carrigallen, Carrigallen, Co. Leitrim |
| *Ballinamore Community School* | Lahard, Ballinamore, Co. Leitrim |