Raspberry Pi Certified Educator Survey
2018

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Introduction

Picademy is the Raspberry Pi Foundation’s free face-to-face training workshop in which we support educators to build the skills and confidence to create computing and digital making opportunities for young people. We run Picademy events in the UK and North America, and graduates become Raspberry Pi Certified Educators (RCEs) and join our worldwide RCE community.

We’ve designed the training programme so that it is suitable for participants from all backgrounds: it’s accessible for beginners, while also providing opportunities for participants with more advanced technical skills to stretch themselves. Our RCE community consists of a diverse range of educators, including school teachers who work with young people of all ages; librarians; museum educators; university lecturers; youth workers; and coding club volunteers. We encourage RCEs to create opportunities for their learners to explore open-ended projects and learn through making.

Every year, we survey our RCEs to find out more about how they apply what they’ve learned, what challenges they face in their setting, and which topics and tools they are using in their teaching. We use this information to ensure that taking part in Picademy is a good use of time for educators, and to improve our support for the RCE community.
Overview

Our annual survey of Raspberry Pi Certified Educators (RCEs) has given us an insight into how educators are applying the skills and knowledge that they developed at Picademy, the impact that they are seeing in the young people that they reach, and the tools and techniques that they are using to teach young people.

Key results

- 83% of RCEs agreed that, since implementing what they learned at Picademy, the young people that they work with have improved their programming skills. 83% of RCEs also agreed that the young people that they work with have improved their confidence in computer skills.

- The RCE community includes a variety of educators. Around 55% of survey respondents from North America and 75% of survey respondents from the UK are school teachers. Some RCEs come from teacher training backgrounds, and some RCEs reach young people via roles as librarians or youth workers.

- The length of time that RCEs have been educating young people varies. The average RCE is just as likely to have been teaching for 20 years as they are to be an educator who started in the last 5 years.

- RCEs teach a range of age groups and, although around three quarters of survey respondents teach Computing or Computer Science, many survey respondents said that they teach other subjects, including Maths, Science, and Design and Technology. We are pleased to report that RCEs have found applications for what they learned in Picademy in additional subjects besides those directly related to computing.

- Scratch and Python are the most popular tools for teaching among RCEs, but RCEs use a range of software and hardware in their teaching.

- The biggest challenge facing RCEs is a lack of funding for equipment in their setting for teaching physical computing, particularly in the UK, but it is also clear that time pressures are a big challenge. More than half of RCEs cited a lack of time to plan creative ideas and a lack of time to develop their own skills as barriers to teaching physical computing.

- Supporting the RCE community is very important to us, and RCEs
gave us more information about how they share what they learn at Picademy. This can range from feeding back to colleagues informally, to running local or international workshops, and blogging about their experiences.

• There is some evidence from RCEs in North America that middle and high school teachers are seeing the greatest benefit from Picademy: 72% of middle school educators and 67% of high school educators reported using what they learned at Picademy monthly or more frequently.

**Recommendations**

• Continue outreach around the Raspberry Pi Foundation resources, such as projects and online courses, so that RCEs know that these resources are available for them and that they can use them for their teaching and continued professional development.

• Conduct further research into how teachers in middle and high school settings are applying what they learned at Picademy.

• Develop and maintain an active online community, including our educator forum, that allows RCEs to network with each other and share ideas and best practice.

• Continue to use Picademy as an opportunity for educators to work together practically to develop ideas.

We received survey responses from 491 RCEs (out of over 2000 total RCEs trained since 2014), of which 210 were from the UK, and 281 were from North America.
Impact

We encourage RCEs to create opportunities for their learners to explore open-ended projects and learn through making, and we wanted to know more about the impact of implementing what they learned through Picademy.

- 83% of RCEs said that the young people that they reach are more confident in their computer skills.
- 83% of RCEs said that the young people that they reach have improved their programming skills.
- 82% of RCEs said that the young people that they reach are more interested in programming and computers.
- 70% of RCEs said that the young people that they reach are better at solving problems using computers.
- 68% of RCEs said that the young people that they reach are more able to teach others computer skills.

Since implementing what you learned, the young people you work with...

% who responded ‘agree’ or ‘strongly agree’

- Are more able to teach others computer skills: 68%
- Are better at solving problems using computers: 70%
- Are more interested in programming and computers: 82%
- Are more confident in their computer skills: 83%
- Have improved their programming skills: 83%

N = 480
How often have you used what you learned at Picademy in your teaching?

- Picademy gives educators practical skills and knowledge that they can immediately apply to their teaching, and we are pleased to report that the vast majority of RCEs have used what they learned.
- 95% of RCEs reported that they use what they learned at Picademy in their teaching at least a few times a year.
- 58% of RCEs reported that they use what they learned at Picademy every month or more frequently.

N = 490
How many young people would you estimate have experienced this teaching?

• We asked RCEs to estimate how many young people had experienced teaching that made use of what they learned at Picademy.

• Over 50% of RCEs said that they have reached more than 50 young people, and 18% of RCEs said that they have reached more than 200 young people since taking part in Picademy.

• The average RCE has taught 140 young people using knowledge or techniques that they learned at Picademy.
Which subject areas have you successfully integrated your Picademy learnings into?

- Picademy is primarily for Computing educators, but as we saw above, RCEs also teach subjects besides Computing. The skills and knowledge developed at Picademy are not designed to be limited to computing, and RCEs have integrated what they’ve learned into a range of other subjects.
- 46% of survey respondents had used what they learned to teach Design and Technology, and 35% of survey respondents had used what they learned in cross-curricular teaching.

Do you keep in touch with other Raspberry Pi Certified Educators?

- We encourage RCEs to stay in contact after Picademy and provide spaces online for them to do so.
- 68% of RCEs indicated that they do keep in touch with other RCEs:
  - 55% of RCEs keep in touch online in public spaces (such as Twitter).
  - 21% of RCEs keep in touch online via email or a messaging service.
  - 15% of RCEs keep in touch through face-to-face meetings at conferences or events.
  - 12% of RCEs keep in touch through one-to-one meetings and local connections.
Who have you passed on your learning to?

- 83% of survey respondents said that they have communicated what they learned to colleagues at their own school or organisation, with 60% of survey respondents also reaching educators in other local schools or organisations.
- 26% of survey respondents said that they have reached educators from other parts of the country, and 15% of survey respondents said that they have reached educators from other countries.

N = 487
How have you passed on what you learned?

- Sharing experiences at staff meetings is the most popular way in which RCEs pass on what they have learned, with 48% of survey respondents running training sessions in their own school or organisation.
- Over one third of survey respondents have been involved in presenting or running workshops, either locally, nationally, or abroad.
Assessing attitudes

How much do you agree with the following statements?

<table>
<thead>
<tr>
<th>Statement</th>
<th>Average Agreement Rate (1–5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Young people can make things with computers that they feel proud of</td>
<td>4.4</td>
</tr>
<tr>
<td>Things young people care about can be made with computers</td>
<td>4.2</td>
</tr>
<tr>
<td>People like the young people I work with make things with computers</td>
<td>3.8</td>
</tr>
<tr>
<td>Young people I work with have the equipment, resources, and space to make things with computers</td>
<td>3.1</td>
</tr>
</tbody>
</table>

N = 487

• An important part of the work of the Raspberry Pi Foundation is understanding people’s attitudes towards computing and digital making, and a first step in exploring this further has been to ask four simple questions to assess attitudes. Specifically, we’d like to understand the extent to which young people (or those reaching them) feel as though computing and digital making is relevant, accessible, and worthwhile to them, and whether they feel as though it is part of their identity.

• RCEs were most likely to agree with the statement concerning whether computing and digital making is worthwhile to the young people that they work with. The average agreement rate to the statement ‘Young people can make things with computers that they feel proud of’ was 4.4 out of 5.

• RCEs were least likely to agree with the statement concerning accessibility. The average agreement rate to the statement ‘Young people I work with have the equipment, resources, and space to make things with computers’ was 3.1 out of 5.

• We will continue to ask this question across future surveys, in order to gather more information on the attitudes of participants across our programmes.
Headline results
About RCEs and the young people that they reach

What is your gender?

- 54% of survey respondents were male, and 45% of survey respondents were female.
- There was a good balance between male and female RCEs completing the survey, which is similar to the overall gender balance of the RCE community (50% male, 50% female).

What is your age?

- The majority of survey respondents were between 35 and 54 years old.
Which of the following best describes your role?

Which of the following best describes your role? (UK only)

- School teacher: 75.0%
- INSET/CPD teacher trainer: 7.0%
- Initial teacher trainer: 7.0%
- Technical support staff member: 5.0%
- Youth worker: 4.0%
- Librarian: 1.0%
- Museum staff member: 0.3%

N = 207

Which of the following best describes your role? (North America only)

- Instructional coach/TOSA: 28%
- Middle school teacher: 22%
- High school teacher: 21%
- Elementary teacher: 12%
- Librarian/ Media specialist: 9%
- Youth/ After-school leader: 5%
- Museum staff member: 3%

N = 274

- We provided different options for this question to RCEs based in the UK and in North America.
- 75% of survey respondents from the UK were school teachers, with teacher trainers accounting for another 14%.
- 55% of survey respondents from North America were teachers. More of the teachers worked in high schools and middle schools than in elementary schools.
• According to the survey, instructional coaches/teachers on special assignment (TOSA) account for 28% of RCEs in North America.

• Other RCEs were most commonly librarians (1% of RCEs in the UK, 9% in North America), and youth workers (4% in the UK, 5% in North America).

• The greater range of roles among RCEs in North America is due to a focus on maximising impact through professions that reach a greater number of young people.

• We aim to select educators who will have the greatest impact on their community, which is why instructional coaches/TOSA are the best-represented category among the RCEs who are based in North America.
Do you have a degree in computer science, software engineering, or a similar discipline?

- Around a quarter of survey respondents had a degree-level qualification in computer science or similar disciplines. This reflects the fact that computing educators come from a variety of backgrounds, and not all computing educators studied computing-related subjects to degree level.

Do you create digital making projects in your spare time?

- Three quarters of survey respondents said that they work on digital making projects outside of their educational setting, which demonstrates that an interest in digital making often extends outside of the classroom for RCEs.
• The majority of survey respondents had been educating for longer than five years, and around 20% of respondents had five or fewer years’ experience.

• We focus on reaching educators across all levels of experience, which is reflected in the range of responses to this question. The average RCE is as likely to have been educating young people for fewer than five years as they are to be a teacher with 20 years’ experience.
• 75% of survey respondents said that they teach Computing/Computer Science, with 40% of survey respondents teaching ICT/IT and 29% of survey respondents teaching Design and Technology/Engineering.

• 67% of survey respondents based in North America said that they teach Computing or Computer Science, compared to 83% in the UK, which reflects the fact that the subject is more established in the UK than in North America. RCEs in North America were more likely than UK-based RCEs to teach Science, and less likely to teach ICT or IT.

Number of subjects that RCEs teach

• Responses of ‘Other’ to the previous question have been excluded from this figure.
• 38% of survey respondents said that they teach two subjects, and 24% of survey respondents said that they teach three or more.

• While the fact that the majority of RCEs teach Computing or Computer Science is expected, many have responsibilities across other subjects. The average number of subjects taught per RCE was just over two.
Ages you work with

The majority of survey respondents said that they teach young people aged between 9 and 15.

In the last year, roughly what proportion of the young people involved in your activities have been girls?

• Around half of the survey respondents said that they teach groups of young people with a balance of gender, but survey respondents were more likely to reach groups that have a majority of boys than a majority of girls.
Headline results
RCEs’ teaching practice

Which of the following areas do you feel confident to teach to young people?

- 84% of RCEs said that they feel confident to teach block-based programming languages like Scratch, and 76% of RCEs said that they feel confident to teach basic electronics. 57% of RCEs said that they feel confident to teach text-based programming languages.
- Around three quarters of RCEs said that they feel confident to teach computing concepts, such as computational thinking (76%), programming (72%), and making use of project-based learning (71%).
85% of RCEs reported using a tinkering approach. In the survey, this was described as ‘encouraging learners to play with a programming environment or piece of equipment and see what they can do’.

83% of RCEs reported ‘using structured projects with an end goal in mind’.

62% of RCEs reported using copying code (‘giving exact code to copy in order to achieve an outcome’) and shared programming (‘demonstrating the programming process as a teacher, possibly with input from learners’).

61% of RCEs reported using targeted tasks (‘e.g. summarising code, spotting the difference between code examples, remixing code, or fixing buggy code’).
The most popular kinds of projects and resources used by RCEs involved Python and Raspberry Pi with electronics — 65% of RCEs reported using at least one of them.
Do your learners follow resources online or use printed worksheets?

- 60% of RCEs said that they use a mixture of printed and online resources when working with learners, while 26% of RCEs reported only using online resources.

What equipment do you have access to for your activities?

- Around 80% of RCEs reported having Raspberry Pis available to them to use in their teaching (RCEs receive a Raspberry Pi following Picademy). 68% and 60% of RCEs said that they have access to laptops or desktop computers respectively.
What software do you have access to for your activities?

- RCEs are more likely to use Windows in their teaching activities (80%) than other operating systems, such as macOS (32%) or Linux.

Which programming languages do you use with young people?

- Scratch (86%) and Python (76%) are by far the most popular programming languages used by RCEs for educating young people.
• RCEs also use the web development languages HTML/CSS (39%) and JavaScript (25%).

Which tools for writing code do you use with young people?

<table>
<thead>
<tr>
<th>Tool</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Python IDLE</td>
<td>58%</td>
</tr>
<tr>
<td>Microsoft Makecode for micro:bit</td>
<td>33%</td>
</tr>
<tr>
<td>Sonic Pi</td>
<td>26%</td>
</tr>
<tr>
<td>micro:bit online Python editor</td>
<td>21%</td>
</tr>
<tr>
<td>Thonny</td>
<td>19%</td>
</tr>
<tr>
<td>Trinket</td>
<td>18%</td>
</tr>
<tr>
<td>Notepad++</td>
<td>17%</td>
</tr>
<tr>
<td>Mu</td>
<td>11%</td>
</tr>
<tr>
<td>repl.it</td>
<td>10%</td>
</tr>
<tr>
<td>Nano</td>
<td>4%</td>
</tr>
<tr>
<td>Atom</td>
<td>4%</td>
</tr>
<tr>
<td>Xcode</td>
<td>3%</td>
</tr>
</tbody>
</table>

0% 25% 50% 75% 100%  N = 491

• The tool most commonly used by RCEs for writing code with young people was Python IDLE, with 58% reporting that they used it in their setting.
We know educators can face challenges in implementing physical computing. How challenging do you find each of the following?

- Over half of RCEs reported a lack of equipment (51%) or a lack of funding for equipment (60%) as challenges for them in teaching physical computing.
- Many RCEs reported a lack of time, including a lack of time to practise their own skills (55%), and a lack of time to plan creative activities (54%).
- Other options not displayed above included the process of purchasing equipment (39%), managing different skill levels of students (31%), lack of support from technical staff (30%), updating software (27%), and lack of support from administrators or head teachers (25%).
Headline results
Engagement with the Raspberry Pi Foundation

Which Raspberry Pi Foundation programmes have you taken part in in the past year?

- 72% of RCEs reported that they had taken part in at least one other programme from the Raspberry Pi Foundation in the 12 months prior to taking the survey. **Online courses for educators on FutureLearn**, **Code Club**, and **Raspberry Jams** were particularly popular programmes among RCEs.
Have you used the Raspberry Pi Foundation’s online projects for teaching or planning your activities?

- 88% of RCEs said that they use the Raspberry Pi Foundation’s online projects to plan their activities at least a few times per year.
- 32% of RCEs said that they use our projects to plan their activities monthly or more frequently.

Where do you access projects and resources?

- 89% of RCEs use projects from the Raspberry Pi Foundation, with 84% of RCEs using our online projects website. 63% of RCEs also use other online resources.
Additional analysis

RCEs in different roles

How often have you used what you learned? Answers by role
% who responded ‘monthly’ or ‘weekly’

- Middle school teacher (NA only) 72%
- High school teacher (NA only) 67%
- School teacher (UK only) 58%
- Instructional coach/TOSA (NA only) 47%
- Elementary teacher (NA only) 47%
- Other roles 55%

N = 480

• We wanted to know whether RCEs with particular roles were more likely to make use of what they learned at Picademy on a regular basis than others.

• Teachers made up 75% of survey respondents in the UK, and 55% in North America, and these groups were most likely to be using what they learned on a monthly or weekly basis. Among RCEs trained in North America, 72% of middle school teachers made frequent use of what they learned, compared to 47% of elementary school teachers.

• Around half of instructional coaches/teachers on special assignment in North America used what they learned regularly.

• Across all other roles combined, 55% of survey respondents used what they learned regularly.
Since implementing what I learned at Picademy, the young people I work with:

<table>
<thead>
<tr>
<th></th>
<th>Elementary teachers (North America only)</th>
<th>Middle school teachers (North America only)</th>
<th>High school teachers (North America only)</th>
<th>School teachers (UK only)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Are better at solving problems with computers</td>
<td>63%</td>
<td>82%</td>
<td>62%</td>
<td>67%</td>
</tr>
<tr>
<td>Are more interested in programming and computers</td>
<td>78%</td>
<td>83%</td>
<td>83%</td>
<td>82%</td>
</tr>
<tr>
<td>Have improved programming skills</td>
<td>75%</td>
<td>87%</td>
<td>90%</td>
<td>81%</td>
</tr>
<tr>
<td>Are more confident in computer skills</td>
<td>78%</td>
<td>88%</td>
<td>91%</td>
<td>81%</td>
</tr>
<tr>
<td>Are more able to teach others computer skills</td>
<td>69%</td>
<td>77%</td>
<td>72%</td>
<td>65%</td>
</tr>
</tbody>
</table>

- Among the RCEs in North America, middle school teachers and high school teachers were the most confident that they had had a positive impact in general on the young people that they worked with, since attending Picademy.

- The percentage of middle school teachers who responded ‘agree’ or ‘strongly agree’ (the agreement rate) to the statement ‘Since implementing what I learned at Picademy, the young people I work with are better at solving problems with computers’ was 82%, compared to 63% for elementary school teachers, and 62% for high school teachers.

- It could be the case that the techniques and tools learned at Picademy are most directly applicable to educators who reach children in these age groups, or that these educators have more capacity to experiment and try different approaches.
These results also give us the chance to examine different teaching practices between computing educators reaching young people of different ages in North America.

- The most popular techniques across school-based educators in North America were tinkering and projects.
- Targeted tasks were more popular with young people in middle and high schools, where students may have more advanced knowledge and skills with specific tools.
Additional analysis
Challenges for educators in different countries

How challenging do you find each of the following?
% who responded 4 or 5 on scale

<table>
<thead>
<tr>
<th>Challenge</th>
<th>NA RCEs</th>
<th>UK RCEs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of equipment for physical computing</td>
<td>48%</td>
<td>54%</td>
</tr>
<tr>
<td>Lack of funding for equipment</td>
<td>54%</td>
<td>66%</td>
</tr>
<tr>
<td>Time to plan creative activities</td>
<td>54%</td>
<td>52%</td>
</tr>
<tr>
<td>Time to practise your own skills and build confidence</td>
<td>53%</td>
<td>57%</td>
</tr>
</tbody>
</table>

N = 491

- RCEs in North America and in the UK reported facing a similar set of challenges, but a higher proportion of UK-based RCEs reported a lack of equipment, and a lack of funding to purchase equipment. 66% of UK-based RCEs reported a lack of funding for equipment, and 54% said that a lack of equipment for physical computing was a challenge for them (54% and 48% respectively among RCEs based in North America).

What equipment do you have access to?

<table>
<thead>
<tr>
<th>Equipment</th>
<th>UK RCEs</th>
<th>NA RCEs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laptop computers</td>
<td>75%</td>
<td>72%</td>
</tr>
<tr>
<td>Desktop PCs</td>
<td>72%</td>
<td>73%</td>
</tr>
<tr>
<td>Raspberry Pis</td>
<td>84%</td>
<td>67%</td>
</tr>
<tr>
<td>micro:bits</td>
<td>33%</td>
<td>43%</td>
</tr>
<tr>
<td>Tablets or iPads</td>
<td>53%</td>
<td>45%</td>
</tr>
<tr>
<td>Arduinos</td>
<td>21%</td>
<td>41%</td>
</tr>
<tr>
<td>Electronic components</td>
<td>53%</td>
<td>53%</td>
</tr>
<tr>
<td>None of the above</td>
<td>1%</td>
<td>1%</td>
</tr>
</tbody>
</table>

N = 491
A comparison of responses from RCEs based in the UK and in North America regarding the equipment that they have available also suggests that a lack of equipment is a challenge in the UK. RCEs in North America were more likely than RCEs in the UK to have access to all types of equipment included in the survey, with the exception of desktop PCs and micro:bits.

Raspberry Pis were the most commonly available equipment for educators across both North America and the UK, which may reflect the community's existing engagement with the Raspberry Pi Foundation.

There were some interesting differences between the types of computing equipment available to RCEs in the UK and in North America. Around three quarters of respondents from North America had access to laptop computers for their teaching, and 57% of respondents from North America had access to desktop computers. UK-based RCEs reported the opposite: around three quarters had access to desktop computers, and 51% had access to laptops.

micro:bits are more readily available to educators in the UK, while Arduino is used more widely in North America.
What is the best thing about Picademy?

We asked RCEs what the best thing is about Picademy. Many told us that their confidence in physical computing had improved, while others said that the ability to network and share ideas with other educators was important to them.

Comments from RCEs

“It made something so foreign and seemingly impossible to understand accessible and I was somewhat successful in only two days. The idea of coding no longer felt like a distant world.” — Kate

“Built my confidence. I now feel free to explore and experiment just as I would hope my students would.” — Maria

“The opportunity to have a go, get it wrong and be supported by the community in learning how to do it better next time. The Raspberry Pi Foundation has given me amazing opportunities to further my learning and confidence in computing.” — Beverley

“The confidence it gives you to teach physical computing.” — Julie

“Picademy was an amazing opportunity to engage within a community of educational stakeholders interested in the potential of the Raspberry Pi. The best thing about Picademy was completing an entire workflow from skill-building activity to design process to presentation. It reminded me how much fun object-oriented programming can be!” — Tom

“Being able to meet and talk with educators from all over. It’s an amazing experience to be able to learn more about what others are doing and get great ideas for computer science in your own class.” — Connie
“One of the best things has been the connection to resources for continuing to learn: I didn’t and couldn’t learn everything in two days, but I do know enough to get started, and where to look for just about anything else I want to try, learn, or teach.” — Eileen
This survey has given us an opportunity to hear more from RCEs about how they work with young people, what tools and techniques they are using, and how they are sharing what they learned at Picademy. We will use what we’ve learned to help us support the community of RCEs and ensure that we keep Picademy relevant for educators.

We asked RCEs to assess how implementing what they learned at Picademy had benefited the young people that they reached. 83% of RCEs agreed that the young people that they work with have improved their programming skills, and 83% of RCEs also agreed that the young people that they work with have improved their confidence in computer skills. Over half of RCEs told us that they use what they learned at Picademy once a month or more often, typically in teaching Computing or Computer Science, but also in other subjects, including Design and Technology and Science. We have also identified that, at least in North America, middle and high school teachers are putting what they learned into practice most regularly, and that these groups are the most confident about the positive impact that they have had on their students since attending Picademy.

RCEs have a range of backgrounds. Most are school teachers, but the RCE community also includes instructional coaches, teacher trainers, and librarians. RCEs range from recently qualified teachers to highly experienced educators, reaching young people across different age groups. Only around a quarter of RCEs have a degree-level qualification in computer science or a related field, but three quarters of RCEs work on digital making projects outside of their educational roles.

RCEs face a number of challenges in delivering physical computing in their settings. RCEs often reported a lack of equipment and lack of time, both to develop their own skills and plan creative activities. Many RCEs told us that while Picademy gave them knowledge and confidence to deliver physical computing lessons, acquiring equipment could be a difficult process in their school or organisation. We’ve also seen evidence that more RCEs in the UK face a lack of funding for equipment than RCEs in North America, where a higher proportion of RCEs have access to certain types of equipment.
Maintaining a sense of community among RCEs is important to us. We asked RCEs how they keep in contact with each other, and many keep in touch via social media or email. The majority of RCEs have shared what they learned with colleagues at their own school or organisation, with others reaching educators locally, nationally, or in other countries, so the impact of Picademy goes beyond those who attended.

From these results, we have identified some areas for further research and actions. We will work to better understand how teachers in middle and high school settings have implemented what they learned, and whether this trend can also be seen among secondary school teachers in the UK. We are aware of challenges concerning equipment for teaching physical computing, so we will ensure that RCEs do not need access to a wide range of equipment to implement what they learn at Picademy. We will also focus on maintaining a community among RCEs, where they can keep in touch and share best practice.

Thank you to all of the RCEs who took the time to tell us about themselves, their experiences, and their teaching. Listening to the community helps us to make Picademy even better, and to support RCEs in teaching physical computing.