

Community repair:

How does attending pop-up repair events impact on individuals' understanding and behaviour toward repair?



Matt Shapley, Christine Cole, Alexander Gnanapragasam and Tim Cooper, Nottingham Trent University, in collaboration with Ugo Vallauri and James Diamond, The Restart Project.

February 2018

Creative Commons License

This item is licensed under a Creative Commons Attribution-Non Commercial-No Derivatives 4.0 International license. For the full text, visit <http://creativecommons.org/licenses/by-nc-nd/4.0/>.

Collaboration Statement

The research presented in this report is the result of a collaboration between Nottingham Trent University and The Restart Project and expands on research originally undertaken between September 2016 and March 2017.

The Restart Project identified areas they wished to investigate further and suggested survey questions. These were subsequently refined by Nottingham Trent University and agreed by both parties. The Restart Project took responsibility for compiling the survey and the collection, collation, coding and checking of the survey responses. The researchers at Nottingham Trent University reviewed and analysed the data provided by The Restart Project.

The work for this report undertaken by Matt Shapley was funded by The Restart Project. Additional work completed by Dr Christine Cole, Dr Alex Gnanapragasam and Prof Tim Cooper was funded by the EPSRC Centre for Industrial Energy, Materials and Products (grant reference EP/N022645/1).

Reference: Shapley, M., Cole, C., Gnanapragasam, A. and Cooper, T. (2018). *Community repair: how does attending pop-up repair events impact on individuals' understanding and behaviour toward repair?* Report by Nottingham Trent University for The Restart Project, London. Retrieved from therestartproject.org/data-and-insights/ntu-research/

Contents

Executive Summary.....	1
Introduction	2
Methods.....	2
Results.....	4
1. General findings	4
2. Engagement with repair activities	5
3. New knowledge and skills	6
4. Attitudes and behaviour towards repair and obtaining devices	8
5. Repair issues and The Restart Project.....	12
Discussion.....	14
Conclusion.....	15
Appendix: Survey form	17

Figures

Figure 1: Respondents' knowledge and skills to undertake repairs at home.....	8
Figure 2: Importance of environmentally-responsible factors and general factors considered when buying electronic devices.....	10
Figure 3: Order of actions respondents take when device breaks	11
Figure 4: Respondents' confidence to undertake repairs at home	12

Tables

Table 1: Environmentally-responsible and general factors considered when buying electrical and electronic devices	4
Table 2: Devices respondents brought to a Restart Party	4
Table 3: Condition of device immediately after a Restart Party.....	5
Table 4: Device status immediately after the event and action taken since.....	5
Table 5: Likelihood of 'thinking about or actually doing' repair-related activities following a Restart Party.....	6
Table 6: Actions taken as a result of attendance at a Restart Party.....	8
Table 7: Importance placed on environmentally-responsible and general factors when buying electrical and electronic devices.....	9

Executive Summary

The Restart Project is a community-based repair initiative which seeks to extend the lifetime of, and reduce the waste from, electrical and electronic devices, thus reducing carbon emissions and enabling sustainable resource consumption. It does so by various means of community engagement. Research reported here focuses on their pop-up repair events, or 'Restart Parties'.

An initial survey was conducted with 99 of 316 individuals who attended Restart Parties across London between September and November 2016. This research explored environmental and repair-related topics and sought to establish the reasons why people attend Restart Parties. It was presented in a report published in March 2017. The current report presents the findings of a follow-up survey which sought to establish if Restart Party attendance had:

- Increased engagement in repair activities
- Fostered new knowledge and skills
- Changed respondents' attitudes and/or behaviour towards repair and obtaining electrical and electronic devices.

The research also examined respondents' understanding of the broader issues around repair and how The Restart Project contributes to tackling them.

The survey approached 74 of the previous 99 respondents and obtained 25 responses. Whilst this small sample size should be noted, the results show that:

- The majority of respondents (60%) had taken environmentally-responsible action with their device since the events, such as continued use of the device or recycling it, but some stored it (16%) or "threw it away" (8%)
- Three-quarters (75%) of respondents were more likely to "attend a community repair event"
- A small majority (56%) of respondents were more likely to attempt repairs at home
- Nearly a third of respondents were more likely to "volunteer at a community repair event" (30%), a higher proportion than those less likely to do so (22%)
- A small proportion of respondents (12%) had volunteered at a subsequent repair event
- Equal proportions of respondents were more likely to use a commercial repairer (39%) as those less likely to do so (39%)
- Respondents gained a variety of knowledge and skills, including laptop servicing skills, device disassembly, how to locate repair manuals, and how to recycle devices
- Some respondents also reported that attendance at Restart Parties improved their confidence to undertake repairs on their own
- Priorities when buying items have changed, although the average importance placed on environmentally-responsible considerations has not
- There was little change in the order of actions taken by respondents when a device breaks
- Respondents did not have a full understanding of The Restart Project's aims.

In summary, the results showed that respondents were more able to repair items and to dispose of those beyond repair responsibly. However, this ability is not consistently put into action. The priorities when buying items, the order of actions taken when a device breaks and recycling rates could be improved, whilst the rate at which items are stored could be decreased. Future work could focus on achieving sustained behaviour change.

Introduction

The Restart Project is a community-based repair initiative that seeks to motivate and help individuals to attempt repairs of their electrical and electronic devices. It also aims to promote awareness of the environmental impacts of end-of-life products and of recycling routes for items beyond repair, and to change the mind-sets and behaviours of individuals either directly or through various media. By doing so, it seeks to facilitate the extension of product lifetimes and the reduction of electrical and electronic waste. Consequently, it has received support and financing from several London waste authorities, including the East London Waste Authority and the London Waste and Recycling Board, who recognise the benefits of repair in their waste reduction strategies.

An initial phase of research (the original survey) was conducted with attendees at sixteen of The Restart Project's parties – pop-up repair events – which were held in London between September and November 2016. This explored environmental and repair-related topics, and investigated the reasons people attend Restart Parties and whether these are primarily economic, environmental or social. The findings were published in March 2017.¹

The current report presents the findings of a second phase of research (the follow-up survey), undertaken during the summer of 2017. It first explains the questionnaire and sample design. The subsequent section presents the key results in relation to the research's objectives, which were to establish the following:

1. The types of devices respondents had brought, their condition immediately after the Restart Party, and actions respondents had taken with them since.
2. If attending a Party had increased respondents' engagement in repair activities.
3. If attending a Party had fostered new knowledge and skills in respondents.
4. If attending a Party had changed respondents' attitudes or behaviour towards repair and obtaining electrical and electronic devices.
5. If respondents had a good understanding of the broader issues around repair and The Restart Project's contribution to tackling them.

Methods

Just over three-quarters of the original respondents, 74 out of 99, had agreed to be approached for future research. During August 2017, they were contacted by email (56) or phone (18). Reminders were also sent where necessary, including text messages for mobile numbers. The times and days of attempts to contact potential respondents were varied in order to increase response rates.

¹ Cole, C. & Gnanapragasam, A. (2017). *Community repair: Enabling repair as part of the movement towards a circular economy*. Report by Nottingham Trent University for The Restart Project. Retrieved from https://therestartproject.org/wp-content/uploads/2017/04/PubSub_8250_Gnanapragasam_a381_Cole.pdf

Upon achieving contact, respondents were given the choice to complete a survey via the online platform, Survey Monkey, or to answer questions by phone. With permission, phone responses were audio-recorded and transposed into Survey Monkey; open-ended answers were recorded verbatim. Only one interviewer was used, which reduced the risk of varying interpretations of answers from different interviewers. The interviewer was fully briefed on good practice, such as not directing answers, in order to accurately record respondents' perspectives, knowledge and behaviour. Participants were offered a £10 voucher for mobile phone repairs from LoveFone, an independent repair company, to incentivise them to respond.

A response rate of 34% (25 out of the 74 invitees) was achieved for the follow-up survey; of these, 13 (18%) participated through an email with a link to the Survey Monkey platform, 11 (15%) by phone interview, and 1 (1%) by an SMS link to the Survey Monkey platform. Due to this small sample size, it was not possible to conduct any meaningful demographic analysis or tests of statistical significance. Furthermore, as 25 respondents equates to only 8% of the 316 individuals who attended Restart Parties during the original phase of research, this report's findings should only be considered as indicative of respondents who attend such Parties.

The follow-up survey contained fourteen questions (Appendix A). Four of these focused on the device respondents had brought to a Party, its repair status immediately after the event, its status between the original and follow-up survey, and what they had told people who had not attended Restart Parties about their experiences. One question examined whether participation in the Party had led to further engagement in repair activities at an individual or community level.

Other questions explored knowledge and skills to repair gained during or since attending a Party; one was used to measure respondents' perceived knowledge and skills to repair and another to measure their confidence.

An open-ended question checked respondents' understanding of The Restart Project's aims and its wider implications for carbon emissions and sustainable resource usage. A ranking question was used to establish their prioritisation of factors considered when obtaining items, and another asked respondents to prioritise actions taken when an item breaks. Analysis of these two questions took account of the varying number of options respondents selected in order to accurately measure the average importance they placed on each. The options were then ranked by these average scores.

Asking about respondents' priorities when obtaining items allowed calculation of the balance of importance placed on environmentally-responsible factors compared to general factors², which was categorised based on literature concerning product lifetimes (Table 1). Environmentally-responsible

² Respondents' ranking sequences were reverse-coded and factors grouped together as 'environmentally-responsible' or 'general'. The scores were added together and for each group the percentage of the total score was calculated.

In the example below, one respondent places more importance on 'general' factors:

- Original order: (1) Env-resp., (2) General, (3) General, (4) Env-resp., (5) General, (6) Env-resp.
- Reverse order: (6) Env-resp., (5) General, (4) General, (3) Env-resp., (2) General, (1) Env-resp.
- Environmentally-responsible = 6+3+1 = 10 General = 5+4+2 = 11
- Environmentally-responsible/General= 10/11
- Environmentally-responsible/General= 47.62%/52.38%

factors include those which contribute to reducing the extraction of raw materials for the production of new products and associated carbon emissions. For example, a product which is ‘reliable’ is likely to last longer and therefore the process of extracting raw materials to manufacture a replacement product is delayed. This analysis was designed to quantify the change in importance respondents placed on environmentally-responsible purchasing factors in comparison to general purchasing factors when obtaining new electrical and electronic devices between the original and follow-up survey.

Table 1: Environmentally-responsible and general factors considered when buying electrical and electronic devices

Environmentally-responsible factors	General factors
Reliability	Price
How long it will last	Reviews and recommendations
Length of warranty	Brand
<i>Other: Environmentally-responsible</i>	Appearance
<i>Other: Ethically-produced</i>	<i>Other: Child-friendly</i>

Note: "Other" indicates an answer which was contributed as additional to the pre-determined response options.

Results

1. General findings

The results showed that nearly half of the respondents (44%) brought a laptop to a Restart Party. Participants also brought smartphones, irons, and various other devices (Table 2).

Table 2: Devices respondents brought to a Restart Party

	Frequency	Per cent
Laptop/Computer	11	44%
Smartphone	4	16%
Iron	3	12%
Electric bike	1	4%
Electric toy car	1	4%
Fan heater	1	4%
iPod/Audio player	1	4%
Kettle	1	4%
Lamp	1	4%
Toaster	1	4%
Total	25	100%

Two thirds of respondents (67%) reported that their device “was working better than before” after the Party they attended, a fifth (21%) indicated their device “was working about the same as before”, and a few (12%) said their device “was not working”. No-one reported that their device “was working worse than before” (Table 3).

Table 3: Condition of device immediately after a Restart Party

	Frequency	Per cent
Working better than before	16	67%
Working about the same as before	5	21%
Working worse than before	0	0%
Not working	3	12%
Total	24	100%

Note: Individual percentages are rounded up to the nearest whole number.

Many respondents had taken environmentally-responsible actions with their devices (i.e. “I recycled it”, “I still use it”, etc.) since attending a Party, regardless of the device’s condition immediately after the event. Such actions increased the lifetime of the device or would allow the re-use of its materials. Two-thirds (67%) of those whose devices were “working better than before” they attended indicated that they still used their device, and 60% of those whose devices were “working about the same as before” still used their device, even with mechanical faults. Two thirds (66%) of respondents whose devices were “not working” recycled their devices (Table 4). There is evidently room for improvement, however, with around one third of respondents in each category either storing it (“It broke again, but I’ve still got it” or “I’m not using it at the moment”) or throwing away their devices.

Table 4: Device status immediately after the event and action taken since

What has happened to that device since attending the event?	Device status immediately after event			Totals
	Working better than before	Working about the same as before	Not working	
I still use it	10 67%	1 20%	0 0%	11 48%
It broke again, but I’ve still got it	3 20%	1 20%	0 0%	4 17%
I’m not using it at the moment	2 13%	0 0%	0 0%	2 9%
I threw it away	0 0%	1 20%	1 33%	2 9%
I recycled it	0 0%	0 0%	1 33%	1 4%
<i>Other:</i> I still use it, but it’s faulty	0 0%	1 20%	0 0%	1 4%
<i>Other:</i> Failed attempt at further fix, then recycled	0 0%	0 0%	1 33%	1 4%
<i>Other:</i> Fuse went. Learnt how to replace it and did so	0 0%	1 20%	0 0%	1 4%
	15 100%	5 100%	3 100%	23 100%

Note: Percentages rounded up to nearest whole figure. “Other” indicates an answer which was contributed as additional to the pre-determined response options.

2. Engagement with repair activities

Many respondents reported that they are “more likely... to think about or actually... attend a community repair event” (75%) and attempt repairs at home (56%). A greater proportion are more

likely to “volunteer at community a repair event” (30%) than less likely (22%), although most are unchanged (43%). The same proportion are more likely to “use a commercial repairer” (39%) as less likely (39%) (Table 5).

Table 5: Likelihood of ‘thinking about or actually doing’ repair-related activities following a Restart Party

	Much less likely	Slightly less likely	About the same as before	Slightly more likely	Much more likely	Don't know	Total
Attending a community repair event	0	2	4	7	11	0	24
	0%	8%	17%	29%	46%	0%	100%
Attempting repairs themselves at home	1	1	8	7	6	0	23
	4%	4%	35%	30%	26%	0%	100%
Volunteering at a community repair event	1	4	10	6	1	1	23
	4%	17%	43%	26%	4%	4%	100%
Using a commercial repairer	1	8	5	8	1	0	23
	4%	35%	22%	35%	4%	0%	100%
		39%	22%		39%		

Note: Percentages are rounded to the nearest whole number.

3. New knowledge and skills

Nearly two thirds (64%) of respondents reported that they had learned something new at the Party that they had attended. Some learnt ‘basic’ skills such as cleaning and good practice with their items:

“[I was shown how to use] compressed air [to clean my laptop].”

“[I learned that you should] put a sticker over the camera on your computer, or you could get hacked!”

“[I learned] how to get fluff out of the earphone jack.”

Others said they learned about how their items worked and how to perform routine maintenance:

“[I learned] how to change a bulb, fix wires and that.”

“[I was] shown how [the toaster] worked and why it couldn't be fixed due to broken wires that were too small to mend.”

“[I learned not to] overload the safety [on the fan heater]!”

Many of the respondents referred to laptops, the device most commonly brought for repair. Comments suggested that some attendees gained highly valuable skills in servicing either hardware or software:

"[I learned how to] dismantle and rebuild a computer."

"I learned how to look for applications and how to open the laptop and what to look for inside."

"[I gained] experience changing RAM."

"[I gained] practical suggestions for making the computer run smoother by creating more space. [The] possibility of getting another operating system like Linux instead of Vista. I found your leaflets for how to deal with camera, laptop or smartphone problems very useful."

"[I learned how] to delete non-essential apps [on] the laptop [and how] to get rid of the double firewall that was inhibiting it from going online when I left the house."

Many respondents reported higher levels of confidence to perform repairs:

"[I learned] that it can be safe to repair and re-use."

"[I saw that] there was a lot to be learnt watching others, getting things set up again, saving things, you know, being thrown away."

"Everything I was shown was new to me, I'd never fixed anything before."

"[I learned that] I can do a lot of things on my own. [...] nice guy signposted me to some websites and where I could buy some basic tools on the cheap."

Respondents were also asked what they had done, or were able to do, as a result of attending a Party. The most commonly reported actions were "looked for repair information online" (48%), followed by recycling electrical products which did not work (40%).

There appears to have been diversity in the uptake of the repair and recycling activities suggested, with most undertaken by at least one fifth of the respondents. Helping at a repair event was least frequently undertaken of the pre-determined response options (12%); however, this indicates that some participants are willing to become volunteers, which suggests that The Restart Project's activities could be expanded (Table 6).

Table 6: Actions taken as a result of attendance at a Restart Party

	Frequency	Per cent
Looked for repair information online	12	48%
Recycled non-working electrical products	10	40%
Fixed electrical items themselves at home	7	28%
Watched repair help videos	6	24%
Sourced spare parts	5	20%
Used repair manuals	4	16%
Helped at a repair event	3	12%
Other: Gained higher levels of confidence	3	12%
Other: None of the above	1	4%

Note: "Other" indicates an answer which was contributed as an additional option not in the pre-determined response options.

The follow-up survey provided evidence that the knowledge and skills of the respondents who participated in both surveys had improved (Figure 1):

- The most frequently reported level of knowledge in the follow-up survey was "novice" (42%), whereas in the original survey it was at the lower level of "basic awareness" (42%)
- By contrast, no respondents reported they had "advanced" knowledge in the follow-up survey, whereas in the original survey a small proportion had done so (8%).
- When levels of knowledge were ranked from 1 ("no knowledge and/or skills") to 5 ("advanced"), the mean response in the surveys increased, from 2.30 to 2.52.

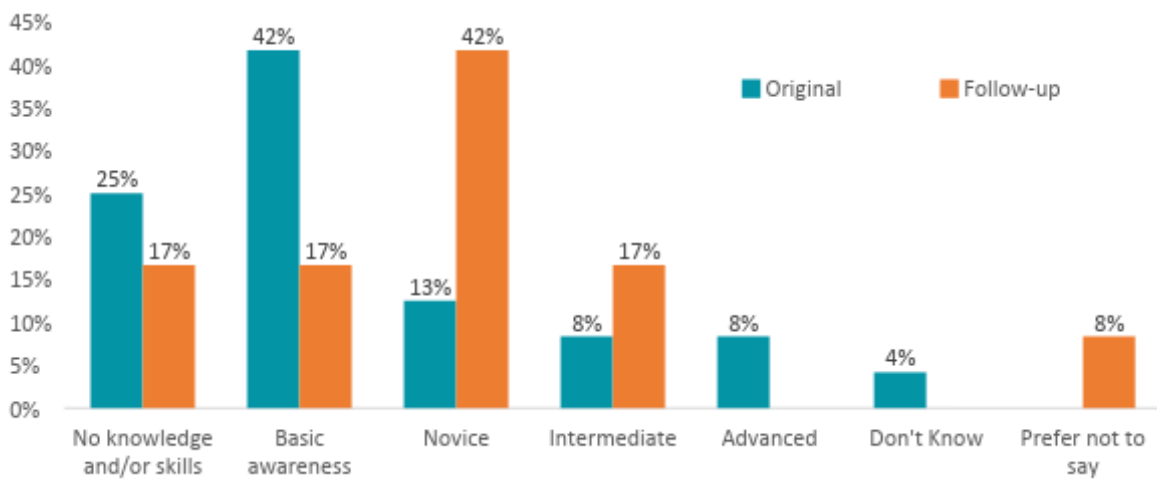


Figure 1: Respondents' knowledge and skills to undertake repairs at home

4. Attitudes and behaviour towards repair and obtaining devices

Attitudes and behaviour were explored by reference to considerations when buying devices and reactions when devices are broken. Respondents were asked to rank, in order of importance, factors they consider when buying electrical and electronic devices. The analysis included pre-determined

options and “other” options suggested by respondents. In addition to analysis of the average ranking scores of individual factors, the factors were also categorised as environmentally-responsible or general as described above (Table 1). The question was asked in both the original and follow-up surveys, enabling a comparison to be made (Figure 2).

Whereas some factors (e.g. price) were consistently ranked highly by respondents in the original survey, orders of importance were more varied in the follow-up survey: scores averaged between 5.00 (highest ranking) and 1.00 (lowest ranking) in the original survey, compared to 4.35 and 2.29 in the follow-up survey.

This is reflected in changes in the average ranking position of the different factors. “Price” dropped from being the most important factor (by a sizeable margin above the second-placed factor, “reliability”) to fourth most important. “Length of warranty” overtook both “brand” and “appearance.” In addition, two of the four environmentally-responsible factors increased in average ranking score, compared to one of the four general factors. However, average ranking scores for “reliability” and “warranty length” unexpectedly decreased, despite overtaking some general factors.

No more than a single respondent mentioned the environment, whether a product was child-friendly, or ethical considerations as “other” options in either survey. Consequently, whilst noted below, these factors are not discussed further.

A comparison was made between environmentally-responsible and general factors in order to identify whether there was any change in the relative importance respondents placed on environmental factors that The Restart Project encourage the attendees of its Parties to consider. This revealed that there was no noticeable change in the relative importance, and that in both research phases, slightly more importance was placed on general factors (for method, see footnote above) (Table 7).

Table 7: Importance placed on environmentally-responsible and general factors when buying electrical and electronic devices

	Environmentally-responsible factors	General factors
Original study	42.28%	57.72%
Follow-up study	42.10%	57.90%

Respondents were asked to rank the order of a range of actions that they would take if an item broke (Figure 3). Higher values indicate that an action was more often one of the first taken. The results show that between the original and follow-up survey:

- There was little change in the order of actions taken
- Independently attempting to fix an item moved from fifth to third, overtaking “ask another person” and “contact manufacturer”
- Storing an item overtook taking a device to a commercial repairer
- Respondents suggested three “Other” actions in the follow-up survey, recycle the device, attend a Restart Party, and give away to someone who will repair and then sell the device, and in each case the action was only suggested by one individual.

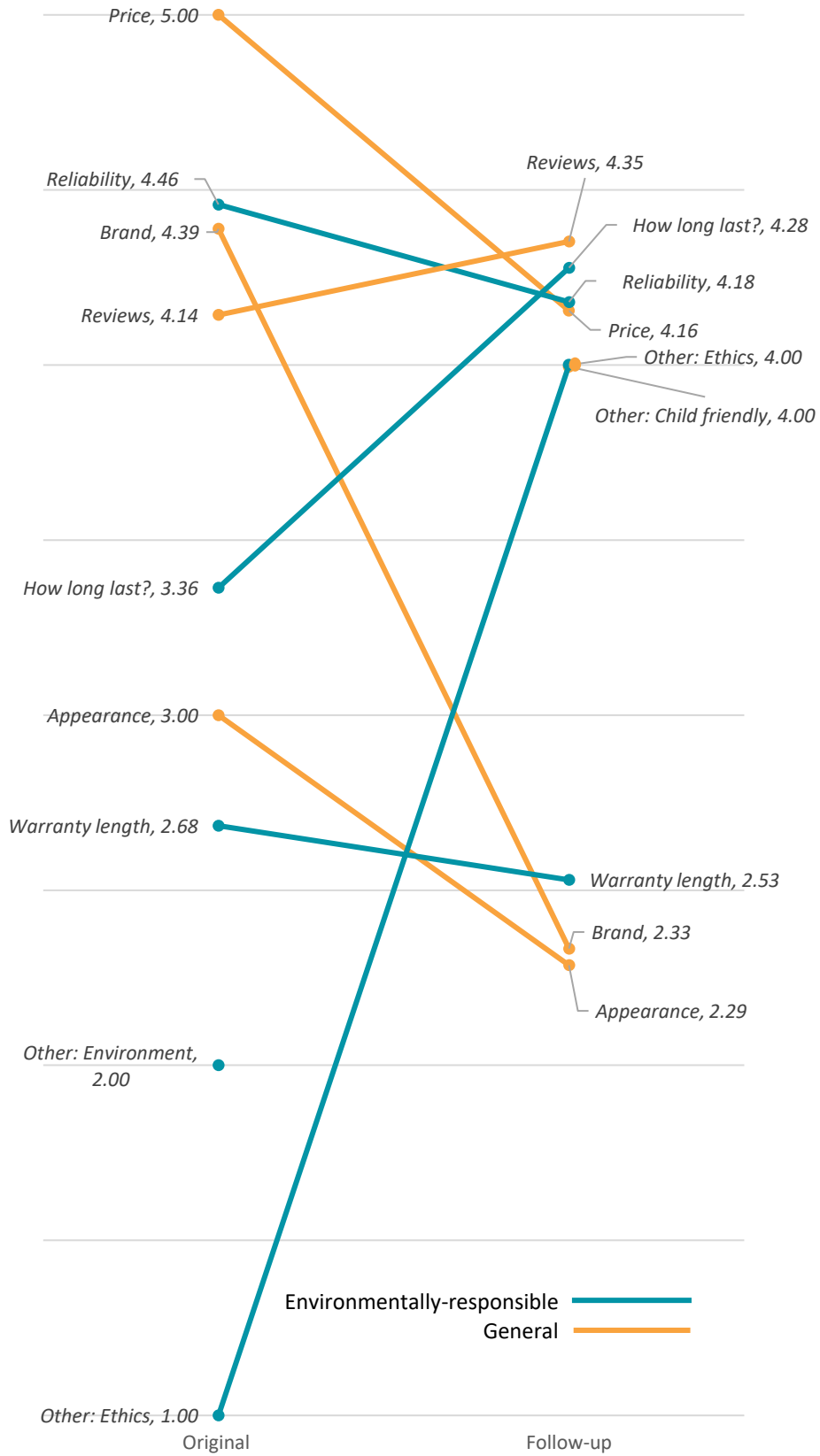


Figure 2: Importance placed on factors when buying electrical and electronic devices

Note: Individual dots, not connected to another dot in the alternative survey, represent factors which were only chosen in that one survey

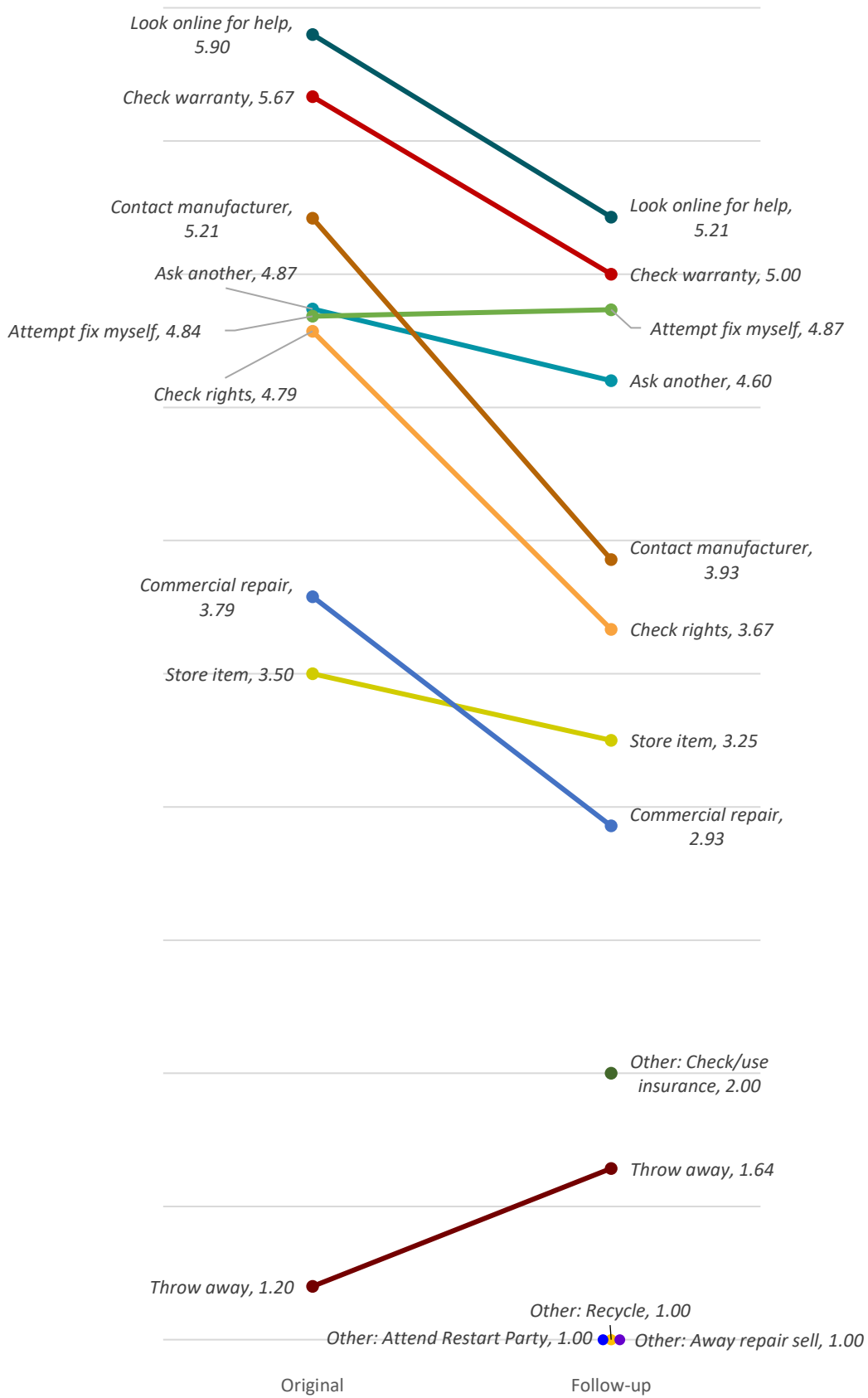


Figure 3: Order of actions respondents take when device breaks

Note: Individual dots, not connected to another dot in the alternative survey, represent factors which were only chosen in that one survey

Another area that was explored was respondents' confidence to repair items. This might be expected to increase as a consequence of increased knowledge and skills, and shape respondents' attitudes and behaviour. Respondents' confidence improved in the follow-up survey (Figure 4):

- Considerably fewer respondents reported being “not at all confident” (25%, compared with 38%)
- More respondents reported being “slightly confident”, “somewhat confident”, or “moderately confident” (4% in each case)
- When levels of confidence were ranked from 1 (“not at all confident”) to 5 (“extremely confident”), the mean response increased, from 2.38 to 2.63.

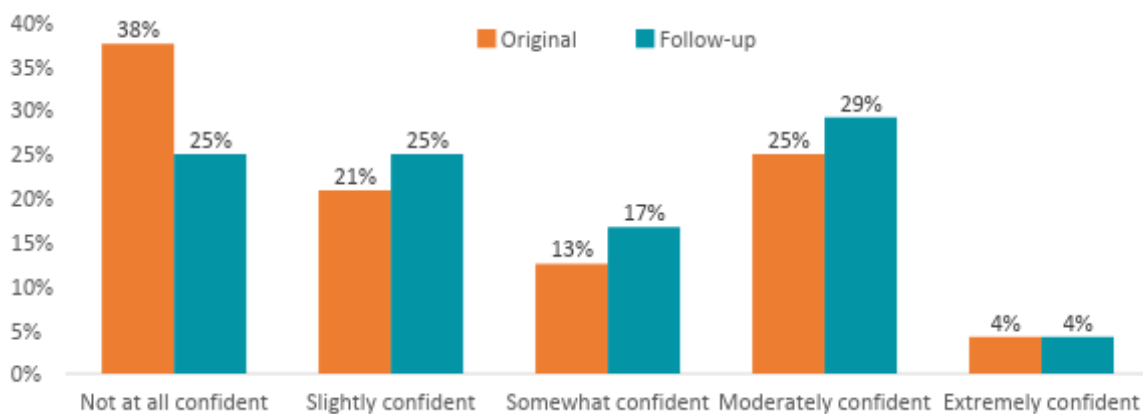


Figure 4: Respondents' confidence to undertake repairs at home

5. Repair issues and The Restart Project

Finally, respondents were asked to summarise “in a couple of sentences, or more” why they thought Restart wanted to help people extend the life of products through repair. This was in order to explore what respondents knew about The Restart Project’s wider purpose and ethos.

One response highlighted community engagement:

“Bring the community people together.”

Some respondents gave generic answers relating to the environment, costs, or both:

“Environmentalism.”

“It is good they can save money, and it helps the environment.”

“Financial sense.”

“To save money.”

“I think it is to help people not to spend a lot of money on repair.”

“To help people that are not in a position to go and buy a brand new one. It [the device] may not be as bad as you think it is.”

However, one respondent’s reference to the ‘throwaway society’ suggested a deeper understanding of the benefits of longer use times over recycling or disposal:

“It’s about the throwaway society, it saves you recycling things and putting them in the ground, and it saves money.”

Others appeared to have a specific understanding that, by removing barriers to repair relating to knowledge, ability or confidence, The Restart Project aids the environment:

“To enable the masses to learn about repairing, rather than taking it to a shop to repair.”

“[To] demystify electronics.”

“To help the environment, educate people, empower people.”

Many respondents mentioned improving knowledge and confidence to enable repair and waste reduction, although this did not extend to referencing the wider context of resource efficiency or resource scarcity:

“One, landfill sucks [and] two, it’s also good to be empowered to fix things for yourself - learning, community, etc.”

“To cut down on landfill [...] change people’s perception that they can do stuff if they are shown how to [...] rather than cash in and get new stuff.”

Others spoke more about waste reduction and resource use:

“Reduction of waste.”

“To prevent unnecessary waste ending up in landfill. To help tackle the problem of increasing amounts of e-waste.”

“To cut down on waste which cuts down on the use of the earth’s resources. If we preserve the earth’s resources, we leave them to the future.”

One response included waste reduction, environmental impact, and saving consumers money:

“I thought one main reason for the Restart Project [to] repair things is to reduce waste and therefore it is an environmental issue. On the other hand, of course, it is

also a way to empower people in a sense. Learning to repair helps to save some money in the end.”

Lastly, extending the longevity of electrical and electronic devices was a common understanding. Whilst many did not detail the wider implications of longevity, some did, pointing towards the various life cycle stages of products and linking longevity with sustainable consumption:

“Because recycling is very important for the environment and it’s now a very mainstream concept for most people. Constantly buying new products and throwing out old ones that could be repaired is wasteful and costs a lot.”

“Reduce e-waste, help people take action to live more sustainably.”

“To save on waste and keep things going as long as they can.”

“The primary thing would be to try make things last a bit longer instead of throwing them away because they don’t work anymore.”

“The single best thing we can do to extend the life of the ecosphere is to consume less stuff - buy less, manufacture less, throw away less.”

“Stop people buying new appliances.”

“Combat wasteful consumer society.”

“Save on resources.”

Overall, responses suggested a reasonable, if limited, understanding of The Restart Project’s purpose, with a few conveying a deeper understanding of repair, such as awareness of different phases in a product’s lifetime or sustainable consumption. None communicated the whole picture in a nuanced, comprehensive manner, although this could reflect the online mode of recording answers. More detail could have been provided by respondents had they been interviewed face-to-face. It should also be noted that formal instruction in repair and its relationship to the circular economy was not provided at the Restart Parties.

Discussion

One objective of the follow-up survey was to establish basic details about the devices that respondents had brought to Restart Parties (Objective 1). Many respondents brought relatively expensive electronic items to parties such as smartphones, suggesting that the repair of such devices is valued especially highly. The fact that after the events two-thirds of respondents’ devices were working better than before confirmed that, with basic guidance, broken devices can often be repaired. A

majority of respondents reported undertaking actions regarded as environmentally-responsible, such as recycling, or continued to use devices with minor faults.

One question examined whether attending a Restart Party had increased respondents' engagement in repair activities (Objective 2). A majority reported that since attending the event they were more likely to attend a community repair event and to attempt repairs at home.

Asked whether attending a Party had fostered new knowledge and skills (Objective 3), servicing and repairing devices featured as lessons learnt, along with greater confidence to attempt repairs. The knowledge and skills reported mostly focused on computers; with a larger sample size, they may have been equally evident for other types of device. Respondents were asked about whether they had undertaken (or were able to undertake) certain repair-related activities as a result of attending a Restart Party and each activity attracted positive responses, although the figures would ideally be higher. Overall, an increase in people's ability to undertake repairs at home since attending a Restart Party was reported.

Respondents were asked about their attitudes and behaviour towards repair and buying devices (Objective 4). Although their confidence appeared to increase as a result of attending a Restart Party, the effects of attending a Party on their priorities when obtaining devices and reactions when they break were less clear. Their attendance did not appear to have had an overall effect on their priorities in either case, but the importance of certain factors increased. For example, respondents ranked "how long it will last" more importantly when asked to consider buying a product and when asked for their reaction when a device breaks the data indicated that they were more likely to attempt to fix it themselves.

Finally, respondents were asked about their understanding of the broader issues around repair and The Restart Project's contribution to tackling them (Objective 5). They demonstrated reasonable knowledge and while no-one reported a comprehensive understanding of repair, this may have been due to the limitations of the survey design.

Conclusion

The overall aim of this research was to establish the repair-related knowledge, attitudes and behaviour of people who had attended Restart Parties and if attending the Party had any effect on them. An online survey was undertaken of those who had participated in an earlier study (n=99) and 25 respondents participated in this follow-up survey. The findings offer insights into how effective The Restart Project is in supporting the repair of electrical and electronic devices and where it could improve its activities.

The analysis showed that after attending a Restart Party a sizeable majority of respondents had taken environmentally-responsible actions with their devices and, overall, respondents were more likely to conduct various repair-related activities. Some had gained valuable computer servicing and repair skills, while others had gained a greater confidence to repair. Respondents indicated that their knowledge, skills and confidence to repair had moderately improved. By contrast, it was unclear whether attendance at a Restart Party had any overall effect on respondents' priorities when buying devices or their reaction when devices break. Lastly, respondents demonstrated a reasonable

understanding of repair issues and The Restart Project's purpose, if not a comprehensive understanding of the wider context of repair.

This second phase of research provided valuable insights but was based on a relatively small sample. In any future quantitative research, a greater number of people who have attended a Restart Party would ideally be surveyed. Such research could explore the range of opportunities available to individuals to attempt repair-related activities, in order to understand the context of their attempts at repair. In addition, qualitative research could be conducted in order to deepen understanding of repair-related attitudes and behaviour, such as links between undertaking repair activity and attitudes and behaviour when purchasing devices, or how to encourage people to use commercial repairers or to volunteer at community repair events.

Appendix: Survey form

We'd like to know what happened to the electrical or electronic device that you brought to the Restart Party last autumn.

Q1: What was the device you brought (If you brought more than one, please choose one for your response).

Q2: What was the condition of the device directly after the event?

- It was working better than before
- It was working about the same as before
- It was working worse than before
- It was not working
- Don't know
- Prefer not to say

Q3: What has happened to the device since attending the event?

- It still use it
- I've given it to someone else
- It broke again, but I've still got it
- It still wasn't working after the event, but has since been fixed and I now use it
- I'm not using it at the moment
- I threw it away
- I recycled it
- Other (please specify)
- Don't know
- Prefer not to say

Q4: Did you learn anything new at the Restart Party?

If yes, please say what

Q5: Have you shared your experience at the Restart Party with others?

Yes/No

If yes what did you tell them?

Q6: Which of the following have you done as a result of the Restart Party last Autumn? (please tick all options that apply)

- Looked for repair information online
- Used repair manuals
- Sourced spare parts
- Watched repair help videos
- Recycled non-working electrical products
- Helped at a repair event
- Fixed electrical items myself at home
- Other (please specify)
- Don't know
- Prefer not to say

Q7: Since the Restart event last autumn, how likely are you to think about or actually do the following?

	Much more likely	Slightly more likely	Stayed about the same as before	Slightly less likely	Much less likely	Don't know	Prefer not to say
Attend a community repair event							
Volunteer at a community repair event							
Attempt repairs myself at home							
Use a commercial repairer							

Q8: In a couple of sentences, or more, why do you think The Restart Project wants to help people extend the life of products through repair?

Q9: What level of knowledge and skills do you believe you have to undertake repairs at home?

- Expert/Professional
- Advanced
- Intermediate
- Novice
- Basic Awareness
- No knowledge and/or skills
- Don't know
- Prefer not to say

Q10: Do you feel confident to undertake repairs at home? [repeat of Q31 in original survey]

- Not at all confident
- Slightly confident
- Somewhat confident
- Moderately confident
- Extremely confident
- Don't know
- Prefer not to say

Q11: Please rank, in order of importance, the factors which you consider when buying electrical and electronic items?

You may select as many or as few factors as you wish, choosing 'N/A' for when you don't want to select an option

If you don't know, or would prefer not to say, please select 'N/A' for each option

- Brand
- Appearance
- Reviews & recommendations
- Price
- Reliability
- How long it will last
- Length of warranty
- Other

Q12: In the last question, if you indicated an 'other' factor which you consider when buying electrical and electronic items. What was this?

Q13: Finally, when something breaks, how do you react? Please rank all relevant options
If you don't know, or would prefer not to say, please select 'N/A' for each option

- Check warranty
- Check consumer rights
- Store Item
- Throw it away
- Commercial repair
- Contact manufacturer
- Look online for help
- Ask another person
- Attempt to fix myself
- Other

Q14: In the last question, if you indicated an 'other' option when you react to something breaking. What was this?