WIDENING THE DIVIDE

The impact of school closures on primary science learning

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Our study

Phase 1

- We surveyed around 180 UK primary school teachers and 360 parents of primary-age children during the full lockdown period.
- We asked questions about home learning generally and science learning/teaching more specifically.

Phase 2

- From the Autumn, we will conduct in-depth interviews with teachers about primary science teaching and learning in 2020.
- We will also survey primary pupils to gather their views.

Phase 1 findings – teaching

- In many cases, less science and a narrower range of topics were taught during the closure period.
- Teachers report a great deal of difficulty in translating the science curriculum for home learning, citing concerns about
  - availability of resources
  - access to the internet
  - parents' ability to support science learning.
- These difficulties were reported more frequently by teachers working in areas of higher deprivation.

Phase 2 findings – learning

- Almost all parents said their children were participating in school maths and English, but only 58% per cent had done school science.
- Many had also participated in home-generated science activities, but one-fifth of parents reported that their child had done no science whatsoever.
- Some families were enjoying science in lockdown, engaging with a wide range of activities and supported by access to relevant resources, technology, and individuals with expertise.

Phase 1 conclusions

- We see the emergence of two lockdown groups:
  - The science ‘haves’ are able to supplement reduced school science with sophisticated extracurricular activities and technology.
  - The ‘have-nots’ may lack the confidence and resources to support any science activity at all.
- The first group’s children will likely emerge from lockdown with an even greater science advantage than they started with.
- Science attitudes and motivations are set at a young age, so this widening gap must be addressed swiftly.

How can WP providers help?

- Science learning loss must be addressed at primary school level – by secondary, science attitudes and aspirations are largely fixed.
- Creative thinking is needed to provide top-up science in a way that does not disadvantage families with low levels of science knowledge/limited resources/poor internet access.
- Focus on science topics, for example light, sound & electricity, that teachers found it hard to provide during lockdown.

For more information

- Our working paper can be found here: https://osf.io/preprints/socarxiv/98rd5/ (Google Canovan primary science)

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[WORKING PAPER JUNE 2020 – ALL COMMENTS WELCOME.]

Abstract

Prolonged Covid-19-related school closures in the UK raised concerns that science teaching and learning at primary level would be negatively impacted. This paper reports the findings of phase 1 of a study that the authors are conducting with teachers and parents to explore this issue. We found that a significant proportion of teachers were providing less science during lockdown than in the normal school week. Teachers, particularly those working in more deprived areas, reported that

- We also have a two-page summary that I can distribute.

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