The Datafication of Primary and Early Years Education

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Seminar at the School of Education, University of Brighton
What is datafication?

- a shift in practice and priorities towards the production, analysis and comparison of attainment data
between 2010 and 2015 while the number of full-time staff increased by just 1.8 per cent.

The ATL, which will debate the problem at its conference next week in Liverpool, said going down to four days would leave newly qualified teachers outside London with annual earnings of just £17,973.

A survey by the Department for Education has shown teachers work on average 54.4 hours per week, with

ONE teacher who has gone down to a four-day week told Metro it was either that or quit altogether. 'I found myself working every evening and a day at weekends, marking, preparing lessons, completing admin and so on,' she said. 'I felt like I was just working all the time.' The London-based secondary school teacher, who has 15 years' experience, said reducing her hours was 'the best decision I've made with my career'. But she added: 'It shouldn't have to be that way.'

93 per cent saying workload is a 'fairly or very serious problem'.

Kevin Courtney, of the National Union of Teachers, said staff had no time for family life because of the government's obsession with making them collect data with little benefit.

But the DfE said it was working with schools to 'challenge unhelpful practices that create extra work'.
Think about it: how have we reached a situation where the data associated with primary assessment need 50 pages of explanation to professionals involved in inspection? What does this say about our current data-obsessed assessment system? It says that it’s far too complicated; far too dependent on numerical data which have a spurious air of precision, reliability and validity; far too impenetrable; far too far from the judgments that teachers need to make about real children’s progress towards greater, genuine understanding. The guidance gives a glimpse into a parallel universe far too removed from classroom reality. (Richards in TES 2016)
Childbase use Connect Childcare online learning journeys. The iConnect learning journey software enables practitioners to make curriculum based observations at the touch of a button, thereby removing the need for separate administrative time away from the children, and results in a more cohesive and comprehensive learning journey report to aid future educators in school.

The ParentZone app provides our busy parents with access to their child’s learning journey at times convenient to them, and enables the upload of photographs, videos and written observations of activities and interests outside nursery.

As your child’s primary educator, we want you to be a confident user and contributor and therefore, take this opportunity to reassure you that data storage, on UK based servers, is certified to the highest international standards with twice the level of safeguards demanded in, for example, internet banking.

Equally, ParentZone is designed to enhance rather than replace daily interactions between the staff team and
Notes:

Today we explored different colour paint and used it to decorate our dinosaurs. We made raawah noises as we painted their feet and walked them along the children swapped the brush between both hands and mixed all the paint together. They played alongside each other for an extended period of time. Jasmine made a variety of lines onto the dinosaur and was able to tell me she was using the colour yellow when asked. Jasmine also used the brush to paint the feet.
children swapped the brush between both hands and mixed all the paint together they played alongside each other for an extended period of time. Jasmine made a variety of lines onto the dinosaur and was able to tell me she was using the colour yellow when asked. Jasmine also used the brush to paint the feet to which she then prints them onto the bottom of the tray.

### Characteristics of Effective Learning

- Engaging in open-ended activity
- Showing particular interests

### Early Years Foundation Stage

<table>
<thead>
<tr>
<th>Activity</th>
<th>Score</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Makes connections between their movement and the marks they make.</td>
<td>16-26</td>
<td>Developing</td>
</tr>
<tr>
<td>Uses single words.</td>
<td>8-20</td>
<td>Secure</td>
</tr>
<tr>
<td>Uses different types of everyday words (nouns, verbs and adjectives, e.g. banana, go, sleep, hot).</td>
<td>16-26</td>
<td>Developing</td>
</tr>
<tr>
<td>Expresses own preferences and interests.</td>
<td>22-36</td>
<td>Commencing</td>
</tr>
<tr>
<td>Plays alongside others.</td>
<td>16-26</td>
<td>Developing</td>
</tr>
<tr>
<td>Explores and experiments with a range of media through sensory exploration, and using whole body.</td>
<td>8-20</td>
<td>Secure</td>
</tr>
<tr>
<td>Notices and is interested in the effects of making movements which leave marks.</td>
<td>16-26</td>
<td>Commencing</td>
</tr>
</tbody>
</table>

Next Steps:

- **Communication & Language**
- **Speaking**
  - Uses single words.
Notes:
Jasmine sits with me in the cosy area. I hold Jasmine and give her her bottle. After a little while Jasmine takes the milk bottle out of her mouth. She removes the bottle from my hand and holds the milk bottle with both hands. Jasmine feeds herself the rest of her milk.

Characteristics of Effective Learning

Showing a 'can do' attitude
Notes:
Jasmine sits with me in the cozy area. I hold Jasmine and give her her bottle. After a little while Jasmine takes the milk bottle out of her mouth. She removes the bottle from my hand and holds the milk bottle with both hands. Jasmine feeds herself the rest of her milk.

Characteristics of Effective Learning

Showing a 'can do' attitude

Being proud of how they accomplished something - not just the end result

Early Years Foundation Stage

Holds own bottle or cup.

Gets to know and enjoy daily routines, such as getting-up time, mealtimes, nappy time, and bedtime.

Enter comment here...
Datafication

We record **how the children enter when they are two**, so we have a baseline and then throughout the year we do 3 assessments with the children at set points and then compare them with each other to **check that they are on track are making progress**. You have to show that you have made ‘value added’ by the time they reach end of Reception. The LA are using that information to predict how 2 year olds are going to do at the end of FS, KS1, and KS2. (Head, Hopetown)

The tracking begins from Nursery in the Prime Areas and right through to Year 6. If you are ‘exceeding’ at the end of Reception you have to show that you are ‘exceeding’ at the end of KS1 and **if not then we are not doing our job.** (Teacher, Easthorne)
Datafication shapes:

- pedagogy and practice
- the values and discourses that dominate the setting
- data-driven subjectivities – child and teacher
Research Project 1: Data in EY

Research sites
- Westhill Children's Centre
- Easthorne Primary School
- Northside Primary School
- Hopetown Nursery School and Children's Centre
- Local authority adviser

‘If the teaching is good, the data should be good and if there’s bad teaching, there is bad data’ (LA Adviser)
Research Project 2: Baseline

The purpose of the reception baseline is for an accountability measure of the relative progress of a cohort of children through primary school. (DfE 2014, 1)
Research Project 2: Baseline

Research sites:

• Alder: 3 form entry, on outskirts of a city, white working-class community
• Beech: 2 form entry, affluent white population, in a town
• Cedar: 3 form entry, diverse urban area with high levels of deprivation
• Damson: 3 form entry, in large urban conurbation with white working-class community
• Elm: 2 form entry, socially mixed intake, mainly white, in a small town
Research Project 2: Baseline

• National survey with 1131 responses:
  – 50% Reception teachers
  – 38% EYFS or Phase Leaders
  – 7% Senior leaders
  – 5% support staff or other

Data and education: the field

Data in processes of governance (Grek 2009; Ozga et al. 2011; Rutledge et al. 2013)

Datafication as international phenomenon (Lingard, Martino, and Rezai-Rashti 2013)

Qualitative studies of data in schools (Pratt, 2016; Finn 2016 on UK; Hardy on Australia 2014)

Data-based governance within schools (Selwyn, 2016)

Critiques of discourses of effectiveness as defined with precision and accuracy (Moss, 2014; Selwyn)

Data as shaping behaviour – ‘productive measures’ (Beer 2015)

Data shaping teachers – ‘dividuated teacher’ (Thompson and Cook 2014); strategic responses (Souto-Otero and Beneito-Montagut, 2014)

Data hierarchies (Manovich, 2012)

Power of software in data-reliant system (Williamson, 2016)
Data and education: theory

• Disciplinary power - exercised through ‘conscious and permanent visibility’ (Foucault 1977)
  – Measurement, comparison and examination, numbers of many sorts, are embedded in and serve the techniques to produce domination and responsibilization and construct ‘calculating selves’ and ‘centres of calculation’ (Ball 2013, 59)

• Or Societies of Control? (Deleuze, 1995)
  – Classically, studies of surveillance suggest that a shift in emphasis from discipline to control [...] has been a key trend associated with the increasingly use of networked electronic technologies that permit surveillance of mobile populations rather than only those confined to relatively circumscribed spaces, and depend on aggregating increasingly fragmented data (Lyon 2014, 2 emphasis in original)
Data and education: theory

• Or both?
  – A Deleuzian approach is misleading if one imagines that the world of top-down government-based surveillance is a thing of the past. (Lyon, 2014, 7)
  – teachers ‘face timelines of accounting, associated with both discipline and control’, subject to both regular observation and assessment ‘with its attendant orientation to disciplinary data’, and the ‘production and flow of data through the network’ (Thompson and Cook 2017, 34).
Individuals have become "dividuals," and masses, samples, data, markets, or "banks." (Deleuze 1995)

the ‘dividual’ is fundamental here, in societies of control the individual is doubled as code, as information, or as simulation such that the reference of the panoptic gaze is no longer the body but its double, and indeed this is no longer a matter of looking but rather one of data analysis. (Simon 2005, 15)
Datafication is *productive*

- a shift in **practice** and priorities towards the production, analysis and comparison of attainment data
- a process which shapes values and subjectivities
Four key arguments

- Datafication is **productive** – of particular data-driven subjectivities, including new roles and hierarchies, and reproductive of some inequalities.

- Datafication is **reductive** – reducing complexity of learning to single numbers and defining quality through proportions.

- Datafication results in **increased visibility of performance** and has thus become an important part of performativity.

- The attraction and danger of datafication both reside in the **permanence of beliefs about accuracy** and therefore the usefulness of tracking and prediction.
Data-driven subjectivities

In this game, you gotta play the game. If you’re being judged on a score – teach to it – you’re a fool if you don’t. You must teach to the test – that’s the agenda.’ (Teacher, Northside)
Values – the ‘tyranny of numbers’

I feel that the baseline assessment has to be completed too early in the year and means that teachers are madly trying to collect evidence, rather than concentrating on the welfare of their new pupils and helping to create a calm and relaxing environment which is vital for a positive start to their school life. (W)

You had to set it up so you could actually assess these things which makes it very difficult to make, to start forming a relationship with the children, which is so important at this time of year. (Teacher 2, Cedar)
Impact on pedagogy

Rather than go with the children’s interests - of what they were interested in – I have geared what I have been setting up in the class to try help me gather information for the purpose of this assessment. (Teacher 3, Cedar).

We assessed usually one activity by activity. So we set up an activity that we knew would fulfil the criteria for certain statements and then watched the children access it and then we just went down [the list of names] and said, yes they can do it. (Teacher 2, Elm)
We have stopped teaching. You know normally we would do very gently settling in, rules, all of that. But then we would start with some of the more formal teaching activities, you know a little bit of phonics, but we have not, we have held back because we don’t want to influence judgements. (Teacher 1, Alder)

It has to be done as early as possible at the crucial time when you should be developing relationships with them not ignoring the majority and looking at a screen 1:1 with 1 child (W)
It’s about who’s going to achieve the GLD (Good Levels of Development). So we say ‘they’re easily gonna make it, thank you very much’. And we say ‘they’re never going to make it so go over there and have a nice time’ and we look to the middle group. We target these children because they are the ones who may make it. It’s the same as Year 6 Sats. So you put all your effort and intervention into those that are just below and it’s a very unfair system. (Early Years Local Authority Advisor)
Data driven subjectivities

The regime of numbers hails us in its terms, and to the extent we turn, acknowledge and engage, we are made recognizable and subject. (Ball, 2017, 44)
I am concerned that this will feed into a league table. I feel no longer trusted as a professional. (W)

We deserve to be trusted as professionals to do what is best for our children's development ensuring their wellbeing is high and their love for learning is nurtured. (W)

If I was sitting in the role play area talking to the children about what they are making and you know engaging with them in that way, I would have to say, ‘Oh I have got to go and do some Baseline assessment’, it would make me feel guilty and it would just be this thing hanging over me and by the end of the six weeks I just thought, there it is. I handed it in and it was like enough was enough. (Teacher 3, Cedar).
In Reception there are still a lot of children who find it difficult to settle in. So my daughter wanted somebody to cuddle when she first comes in when I say goodbye, so I am thinking that the teachers have a pile of papers on their desk waiting and they have to think ‘Will I be there for the children or will I be there for the paperwork?’ So I can see that they get taken away from actually being there with the children when I just want them to play with the children and keep them safe and cuddle them. (Parent, Research Project 2)
The ‘dividuated’ teacher

…the statistically derived product of students’ test scores represents a new, more intense, virtual (and fragmented) logic of schooling and teaching. When tests are fed into a machine that converts them to data-points aggregated via a computer program a pattern of data-points emerges that tells a story that is more powerful than that concerning how well this teacher enforces the timetable or uniform policy. [...] These teachers are rewarded or punished for the patterns they produce; not for anything they do in the classroom. (Thompson and Cook 2014, 133, my emphasis)
I can tell you, we head teachers just sighed, we just kind of had a group hug at the meeting, rolled our eyes, and thought here we go again. (Head, Alder)

In the back of my mind I knew I had to do this Baseline and it wasn’t really for my purpose it was for the government, so that kind of made me a bit anti to start with. (Teacher 2, Cedar).

I have always taken the philosophy that as a teacher you know you have to do things you don’t necessarily want to do or you might not see a purpose for but it is just one of those things that you have to do. (Teacher 2, Alder)
Children

CEM [baseline test] doesn't take into account anything other than literacy and maths. What happened to "the unique child"? (W)

As a teacher I would rather spend time supporting children settle in properly, talk to them, get to know them as individuals, use my experience to identify needs and interest, not just fill in more forms. (W)
As we go through the interview questions, the Reception teacher shows me her results from Early Excellence. They are presented as a grid of coloured dots, indicating whether a child is above, expected, below or well below. Each child is a horizontal line of dots, while each area is in a vertical line, so that she can see who has a lot of blue dots, for example, and which areas her class do well or badly in. It looks very attractive, like a Damien Hirst spot painting. She refers to children with ‘lots of blues’, meaning lots of ‘well belows’. (Interview Fieldnotes, Damson)
If you have got 60 young people coming in through the door and in six weeks’ time you have got to tick 47 boxes about all of them, of course your mind is going to be on that rather than on talking to them about their nice shiny shoes and about their pet rabbit at home and all those things that give young people a sound, secure start to learning. (Head, Beech)
I am now pushing information into three-year-olds rather than developing meaningful relationships. Even in the nursery I now feel that pressure. If a child doesn’t recognize a number or a letter I go “aggghhh’ and hold my breath. I have to remind myself the child is three and not yet ready for it. (Teacher, Easthorne)
Where did learning through play and having fun disappear off to and get replaced by this extreme pressure of grading and assessing children like sausages in a factory? (W)

Children are not sausages all made the same, let them be children and trust professionals to do their job. (W)

Gaining this kind of information assumes that they will learn according to totally adult-directed process, akin to a factory model; the great conveyor belt of education. (W)

Testing them makes them into data driven robots. (W)

They are children and they are not robots, not machines, they are children. (Teacher 3, Cedar)

We have constant meetings looking at the data. It has become very clinical and children have just become numbers … (Teacher, Northside)
What makes **databased selves** different from our actual selves is that databased selves are more easily accessible, observable, manageable and predictable than we are. (Simon 2005, 16)
Schools’ responses

• As people are subject to these forms of measurement they will produce different responses and outcomes, knowing, as they often will, what is coming and the way that their performance will become visible (Beer 2015, 10)
‘Dataveillance’ – the surveillance of schools not physically, but through numbers. Simons describes:

- a kind of self-government [...] where one submits oneself permanently, voluntarily and openly to the gaze of others (Simons 2014, 167)

- ‘visibility is a trap’ (Foucault, 1977)
We ‘name and shame’ by showing all the school names [on the data sheet]. Some schools didn't have any children at ‘working above the expected level’ so you say ‘Well your statistical neighbour has this percentage, so how come you haven't?’ And they think ‘I'd better go back and have another look at that’ […] It does challenge them and that's why we do it. It's accepted and I've not had any adverse comments. It was agreed by the Heads that they wanted that. (Local Authority Advisor)
• ‘the production of data does not reduce the anxiety, but generates further necessities – are we collecting the right data? Do we have the right story to tell about our data? What can we do to improve ‘our data’?’

• Need to produce your ‘Ofsted Story’ (see BJSE paper on narratives of progress)
Manipulation as ‘rational and attractive’ (Lingard and Sellar 2013, 646):

Schools want their baseline scores to be low in order to maximise the progress they can show. […] Headteachers’ wishes for low baseline scores also means that we are beginning the year looking for the negatives in children—what they can't do and how low they can be scored in order to make our scores low. This is the very antithesis of the philosophy behind the EYFS, which makes me very uneasy about completing such an assessment. (W)
Obviously you are not going to shoot yourself in the foot, okay, if you are assessing a child with Baseline and it is a simple yes or no and we all know that there is a lot of grey in the middle of yes and no. Are you really going to tick the yes box if you are in any doubt? You are going to tick the no box aren’t you? (Head, Alder)
Although we are bound down and broken by those judgements and the way people view us we believe in what we do and hopefully we will get good results by doing what we do, which we think is right, so we don’t play those games. I know a lot of schools are forced to do that, particularly schools that are in trouble. (Head, Damson)
The ‘dividuated teacher’?

- the latest form of high-stakes testing, with its emphasis on data-points, data-sets and databases, disconnects the disciplinary space of the classroom so that moralising judgement of teachers’ manipulation of the data cannot account for the space in which teaching is constructed (Thompson and Cook 2014, 132)
Data as fabrication?

Fabrications conceal as much as they reveal. They are ways of measuring oneself within particular registers of meaning, within a particular economy of meaning in which only certain possibilities of being have value. However, such fabrications are deeply paradoxical […] Fabrications are both resistance and capitulation. They are a betrayal even, a giving up of claims to authenticity and commitment, an investment in plasticity. (Ball 2003, 225 emphasis in original)
The desire for freedom

We’re totally data driven. **If the data is good Ofsted leave us alone** but if the data is poor they drill right down into everything. We’ll be punished if we have poor data, so obviously it’s a huge huge pressure to get the data looking good. Ofsted take the data from Year 6 and work back and see where they were in Year 2 and Reception. So it has really influenced thinking. (Deputy Head, Eastside)
You’re only as good as your last year’s results across the whole school. Get the data right and you buy five years of freedom. (Head, Northside)
Social justice and data

• If parents, like the parents you have spoken to this morning, pick up on the fact that this is happening every year there is the likelihood that some parents will be spending the whole summer holidays teaching, you know getting hold of this baseline assessment, looking at the criteria. Because there is this natural need for your child to pass tests you will be coaching them to pass the test. Another parents won’t, so that is not a narrowing of the gap; that is an immediate widening of the gap that we already have. (Head, Alder)
Key arguments:

‘…data are a powerful means of control which delineate what knowledge is important, who is successful, and what we can expect from children.’ (p128)
Key arguments:

Data are productive and reductive:

‘Through combining together ever greater numbers of datasets […] the datafied child with potentially limited pre-determined goals, expectations and pathways becomes a possibility’ (p127)
Key arguments:

‘Datafication has instensified processes of performativity, creating a hyper-performative atmosphere where everything must be quantified and accounted for.’ (p129)
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