ABC Learning Gains project

A longitudinal mixed-method study of learning gain: applying Affective-Behaviour-Cognition framework at three institutions

12/03/2019 **Bart Rienties**

National learning gains conference 12 March

@learninggains presented their latest research on Tuesday 12 March 2019, whereby the slides are available here.

Lessons learned from 200K students and 2 GB of learning gains data Birmingham, Learning Gains conference 12 March 2019 https://twitter.com/LearningGains https://abclearninggains.com/ The results of the ABC project were made possible due to Simon Cross, Ceri Hitching, Ian Kinchin, Simon Lygo-Baker, Allison Littlejohn, Jekaterina Rogaten, Bart Rienties, George Roberts, Ian Scott, Rhona Sharpe, Steve Warburton, and Denise Whitelock.

Taking stock: have we failed to define and measure learning gains?

In the last three years substantial efforts have been made by a vast number of researchers, teachers, and higher education institutions in the UK to define, conceptualise, and measure learning gains. The concept of learning gains, briefly summarised as the distance travelled by students, has been hailed by some as an opportunity to measure "excellence" in teaching. Simply formulated, good to excellent teaching will help students to achieve higher learning gains, and thus measuring learning gains could help policy makers to determine which institutions provide the best value for money. As highlighted by recent articles in Times Higher Education as well as a special issue in Higher Education Pedagogies, the jury is still out whether (or not) we can actually define and measure learning gains.

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This wine and debate knowledge exchange event will bring together some of the leading scholars and practitioners from the 12 learning gains projects supported by HEFCE/OfS. Join us at the Open University, Jennie Lee Building, Milton Keynes, on Tuesday 13 November 2018 from 1600-1900 to contribute to our interactive debate. There are a limited number of free places available, which can be booked here.

Confirmed panel speakers/debaters	(last updated: 17-10-2018)
Dr David Baume (University of London, independent consultant)	Prof John Richardson (Open University UK)
Dr Heike Behle (Warwick University)	Prof Bart Rienties (Open University UK)
Dr Simon Cross (Open University UK)	Dr George Roberts (Oxford Brookes University)
Prof Allison Littlejohn (Open University	Oniversity)
UK)	Dr Ian Scott (Oxford Brookes University)
Dr Simon Lygo-Baker (University of	Prof Rhona Sharpe (University of Surrey)
Surrey)	Prof Denise Whitelock (Open University
Dr Sonia Ilie (Cambridge University)	UK)
Dr Maria Pampaka (University of Manchester)	





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Recordings and slides from "Using data to increase learning gains and teaching excellence" event

Thanks everyone for your excellent contributions and insights from our "Using data to increase learning gains and teaching excellence" event. If for some reason you missed the exciting @LearningGains @HEFCE event @OpenUniversity, or want to rewatch some of the presentations, you can rewatch the entire day with amazing presentations from @rjsharpe @SurreyDhe @SimonJCross @LegacyLGproject @soniailie @FabioArico @dermott_paul @ @HeikeBehle @FiCobb and discussions on Youtube.

- The lightning presentation slides and morning session slides are available here
- The afternoon presentation slides are available here
- All tweets of the event are available #learninggainsOU
- Pictures from the event are available here



☐ <u>Uncategorized</u> ☐ <u>O Comments</u>

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Bart Rienties <u>22/11/2017</u>

22 January 2018 HEFCE open event "Using data to increase learning gains and teaching excellence"

With the Teaching Excellence Framework being implemented across England, a lot of higher education institutions have started to ask questions about what it means to be "excellent" in teaching. In particular, with the rich and complex data that all educational institutions gather that could potentially capture learning gains, what do we actually know about our students' learning journeys? What kinds of data could be used to infer whether our students are actually making affective (e.g., motivation), behavioural (e.g., engagement), and/or cognitive learning gains? Please join us on 22 January 2018 in lovely Milton Keynes at a free OU- and HEFCE-supported event on Using data to increase learning gains and teaching excellence.

This open event brings together nearly two and half years of research on learning gains and teaching excellence, across numerous institutions, also including University of Surrey, Oxford Brookes University, and The Open University (http://abclearninggains.com). This one-day event is a great opportunity to share expertise, research insights, and policy insights. If you want to contribute and share your research or practice in form of a lightning presentation (1-2 minutes quick presentation), please let us know your preliminary title and 100 words summary, and send this to.

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You can register for this free event here. Please note that places are limited and will be allocated on a first-come-first-served basis. The live-stream of the event will become available here.

Confirmed agenda

10.30-11.00 Welcome and Coffee

11.00-11.30 Lightning presentations by participants, outlining insights about learning gains

1130-1300 Insights from the ABC-Learning Gains project

- Dr Jekaterina Rogaten (OU): Reviewing affective, behavioural and cognitive learning gains in higher education of 54 learning gains studies
- Prof Bart Rienties & Dr Jekaterina Rogaten (OU): Are assessment scores good proxies of estimating learning gains: a large-scale study amongst humanities and science students
- Prof Rhona Sharpe (University of Surrey) & Dr Simon Cross (OU): Insights from 45 qualitative interviews with different learning gain paths of high and low achievers
- Dr Ian Scott (Oxford Brookes) & Dr Simon Lygo-Baker (OU): Making sense of learning trajectories:
 a qualitative perspective

13.00-14.00 Lunch

14.00-15.00 Measuring learning gains with (psychometric) questionnaires

- Dr Sonia Ilie, Prof Jan Vermunt, Prof Anna Vignoles (University of Cambridge, UK): Learning gain: from concept to measurement
- Dr Fabio Arico (University of East Anglia): Learning Gain and Confidence Gain Through Peerinstruction: the role of pedagogical design
- Dr Paul Mcdermott & Dr Robert Jenkins (University of East Anglia): A Methodology that Makes Self-Assessment an Implicit Part of the Answering Process

15.00-15.45 Measuring employability learning gains

- Dr Heike Behle (University of Warwick): Measuring employability gain in Higher Education. A case study using R2 Strengths
- Fiona Cobb, Dr Bob Gilworth, David Winter (University of London): Careers Registration
 Learning Gain project

15.45-16.30 Open discussion how to make data effective for learning gains and teaching excellence

Venue – Milton Keynes: Open University UK, Jennie Lee Building, Meeting Room 1, MK7 6AA, Milton Keynes

☐ Conferences, Impact ☐ 1 Comment

22/11/2017 **Bart Rienties**

ABC Learning gains presented at ESRC Belfast conference

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Jekaterina Rogaten from the OU gave a ESRC Festival public talk aimed at academic and non-academic audiences about the future of HE and research on learning gains that is done as part of the ABC learning gains project The discussion was centred around topic of Big Data in education and how it shapes the future of higher education in UK. The session was interactive with participants invited to debate what is good and what is bad about using Big Data in education, and what learning gains we expect HE students to make. The talk covered how learning analytics can be used to predict someone's success or failure and how universities can use this data to advance students' learning. Using learning analytics we can predict how well students will do in their courses and identify students who need a helping hand to progress and achieve their academic potential. Learning analytics can also help us to design better educational environment that is effective in facilitating knowledge, skills and abilities development. The talk also covered how we can as HE providers use learning analytics to the advantage of teachers, students and policy makers.

- Packed audience for 'How big data can predict your success and failures' with Dr Jekaterina Rogaten @OpenUniversity #esrcfestival @OUBelfast pic.twitter.com/Sq2OYdrDI8
 - ESRC Festival NI (@ESRCFestivalNI) November 10, 2017

ABC project presenting at SRHE 2017 conference

The ABC learning gains project will present their research at the SRHE 2017 conference as part of the two symposia on learning gains. The symposia will highlight substantially different learning gain experiences and practices, whereby a complex understanding of measurement of learning gains is needed to unpack the intertwined, dynamic, disciplinary-sensitive, and non-linear development of students in higher education. At SRHE, we set an evidence-based agenda and will discuss the affordances, lived experiences, limitations, and caveats of using different measurements, conceptualisations, and methodologies for assessing learning gains.

A multi-level longitudinal analysis of 80,000 online learners: Affective-Behaviour-Cognition models of learning gains

Conference of the EARLI SIG 17

Qualitative and Quantitative Approaches to Research on Learning and Instruction 17-19 August 2016 Maastricht University, Maastricht, the Netherlands.

Authors: Jekaterina Rogaten, Bart Rienties, Denise Whitelock, Simon J. Cross and Allison Littlejohn.

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Open University, UK

One of the challenges facing higher education is understanding what counts for an excellent educational outcome. Historically academic performance was a variable of choice for measuring 'excellence' in education, but more recently a concept of learning gain, which can be defined as change in knowledge, skills and personal development across time (e.g., Andrews et al., 2011; Boyas et al., 2012) gained momentum. Educational research also mainly looked at cognitive gain largely ignoring affective changes (attitude) and behaviour (Tempelaar et al., 2015a). Current research aims to address this gap by developing and testing an Affective-Behaviour-Cognition model of learning gains using longitudinal multilevel modelling. The learner-generated affective-behaviour-cognition data was retrieved from university database for 80,000+ undergraduate students who started their degree in autumn 2013/14. The preliminary multilevel modelling revealed that cognitive and behaviour learning gains are well explained by the hypothesised Affective-Behaviour-Cognition model, whereas the more complex affective learning gains model needs further refinement. The main strength of this research is that approach used is a practical and scalable solution that could be used by teachers, learners, higher education institutions and the sector as a whole in facilitating students' learning gains by further improving and personalising provision of higher education.

Aims of the ABC model of learning

An evidence-based approach of learning gains can be applied across Higher Educational Institutions (HEIs) would be of value to students, institutions and national organisations.

Most studies of learning gains have focussed solely on cognitive learning gains (Bowman, 2010; Liu, 2009; McGrath et al., 2015). In line with well-established educational psychology principles and recent learning analytics approaches, which enable greater insight to be achieved from large data sets, we propose an *Affective-Behaviour-Cognition (ABC) model* of learning, to broaden the concept of learning gain, and – more importantly – to develop, test, implement and evaluate a range of measurements for learning gains at each of the ABC levels.

☐ Aims & Themes, Uncategorized ☐ O Comments
17/12/2015 ■ m06922

A Higher Education Challenge

One of the challenges facing higher education is in understanding what counts for an excellent educational outcome, how students' learning can be measured effectively, and how these measurements might be used to guide current investments and inform future developments.

While there is a substantial body of research examining learning gains in the USA and in the Netherlands (Bowman, 2010; Pascarella, Blaich, Martin, & Hanson, 2011; Tempelaar, Rienties, & Giesbers, 2015a), recent review of the learning gain literature by McGrath, Guerin, Harte, Frearson, and Manville (2015) indicated that approaches to measuring learning gains are in their infancy in higher education in England.

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