Impact case study (REF3)

Institution: University of Chichester

Unit of Assessment: UoA 4 (Psychology)

Title of case study: Drawing out emotion: improving the understanding and assessment of children's drawings

Period when the underpinning research was undertaken: 2015-2019

Details of staff conducting the underpinning research from the submitting unit:

Name(s):	Role(s) (e.g. job title):	Period(s) employed by submitting HEI:
Dr Esther Burkitt	Reader in Developmental Psychology	2009-present

Period when the claimed impact occurred: 2015-2020

Is this case study continued from a case study submitted in 2014? N

1. Summary of the impact (indicative maximum 100 words)

Research led by Esther Burkitt (UoC) resulted in far-reaching improvements in public understanding of how children express emotion through drawing, and a significant shift in the relevant assessment approaches of education sector professionals. An international survey with families and child-focused professionals reported that, as a result of this work, participants became sensitive to context and complexity in children's drawings in new ways, while interviews also attested to a methodological change among educational professionals towards incorporating 'mixed emotion graphs' in assessments based on them. Together, these interventions are helping children and adolescents to better understand and communicate the complex emotional experiences they encounter.

2. Underpinning research (indicative maximum 500 words)

Children's drawings of emotive subjects have long been used, alongside verbal communication, by educational, clinical and legal professionals to understand how children feel and think. Effectively interpreting children's drawings in this way has, however, often been problematic, with conclusions frequently presented without any reference to cues in 'drawing situations', or to the possibility that children might express complex rather than simple emotions in their drawings.

Burkitt's work is the first systematically to explore influences in classroom and interview-based drawing situations that impact on how, and how reliably, we can interpret children's drawings of emotional information. This research uses an exhaustive experimental 'double-blind' coding methodology to analyse drawings produced by 938 children, each of whom produced 3 'counterbalanced' affective drawings over a 1-hour assessment period. Published between 2015 and 2019, it represents a comprehensive survey of affective drawing behavior in early-mid childhood, including detailed findings on 175 8-9-year-olds (**R2**), 200 7-8-year-olds (**R4**), 322 6-11-year-olds (**R5**), and 241 5-11-year-olds (**R6**).

The key insight evidenced by this body of research is that children asked to convey emotional information about themselves will typically vary their depictions when asked to draw for different people (**R2**), emphasising different positive/negative information depending on how they perceive their audiences – particularly in relation to audience familiarity and perceived professional status. Boys, for example, will tend to draw more negative features for an unfamiliar policeman than girls, who will draw in a more positive way – suggesting

gendered differences towards emotional communication to adults in different positions of authority. Burkitt has also shown that while adults will often simplify the complex emotions conveyed in childrens' drawings, adult intuitions can nonetheless be fairly reliable when assessing some of the features children report using to communicate positive and negative emotion in this way (**R4**).

In a related way, following on from this work, in 2018-19 Burkitt led collaborative projects with colleagues at the UoC and Royal Holloway (University of London) to demonstrate how complex affective experiences involving contradictory feelings about a subject can be mapped over time on a single graph, to better understand children's emotional development and their various types of mixed emotional experiences. These projects analysed data on 343 children and adolescents, including 163 12-18-year-olds (**R1**) and 180 5-7-year-olds (**R3**). This research was particularly significant, because it introduced an entirely new paradigm to the psychological study of children's emotions, which had hitherto overlooked the types of mixed emotions children can simultaneously experience. In doing so, it revealed more types of complex experiences across childhood and adolescence than had previously been uncovered solely by verbal reports. It also indicated how a range of factors can be interpreted and discussed with children and adolescents to better understand their communication of emotion, and the nature of their complex emotional experiences.

3. References to the research (indicative maximum of six references)
R1. Burkitt, E., Watling., D., & Cocks., F. (2019). Mixed emotion experiences for self or another person in adolescence. *Journal of Adolescence*, 75, 63-72. doi: 10.1016/j.adolescence.2019.07.004.

R2. Burkitt, E., Watling, D. & Message, H. (2019). Expressivity in children's drawings of themselves for adult audiences with varied authority and familiarity. *British Journal of Developmental Psychology*, doi: 10.1111/bjdp.12278.

- This article was in top 10% most downloaded for the *BJDP* in 2019-20

R3. Burkitt, E., Lowry, R., & Fotheringham, F. (2018). Children's understanding of mixed emotions in self and other: Verbal reports and visual representations, *Infant and Child Development*, e 2076. 27(3). doi:10.1002/icd.2076.

R4. Burkitt, E. (2017). Assessing the concordance between child reports and adult observations of single and mixed emotion in children's drawings of themselves or another child. *Educational Psychology*, 38(1), 75-98. doi:10.1080/01443410.2017.1390072.

R5. Burkitt, E. (2016). The effects of task explicitness to communicate on the expressiveness of children's drawings of different topics. *Educational Psychology*, 1–18. doi: 10.1080/01443410.2016.1150422.

R6. Burkitt, E. & Watling, D. (2015). How do children who understand mixed emotion represent them in freehand drawings of themselves and others? *Journal of Educational Psychology: An International Journal of Experimental Educational Psychology*. doi: 1080/01443410.2015.1044942.

All outputs available on request.

4. Details of the impact (indicative maximum 750 words)

The impact consists of two strands:

- Public understanding and approaches to assessing children's emotions with drawing has been improved, both nationally and internationally
- Approaches to emotion assessment among education sector professionals in London and West Sussex have been enhanced by the mixed emotion graphing technique

Improving public understanding and approaches to children's drawings

In 2015 Burkitt created The Children's Drawing Archive (CDA), an online archive of children's drawings produced in research environments, presented with key research insights, designed to increase public understanding of how and why young people 'draw out emotion'. In November 2017 she launched a survey on the CDA, which was designed both to measure changes in public understanding related to her research, and to effect changes in how members of the public engage with children and their drawings. Both the archive and the survey on the CDA present Burkitt's research in easily digestible formats, including concise explanations, attractive images, interactive controls and digital drawing activities.

CDA analytics reveal that between January 2018 and January 2019 875 new users viewed the website's content, and from November 2017 to July 2020 the survey gained 504 respondents internationally (**C5**). Of these, 82% who viewed the archive reported that they found it interesting, and 72% reported how (qualitatively) they would look for and ask about mixed emotions in children's drawings. When analysed, these qualitative survey responses reveal that of the 504 respondents, 198 were predominantly caring for/working with 4-6-year-olds, 180 for/with 10-12-year-olds, and 151 for/with 12-14-year-olds (**C1**).

The survey respondents included 215 parents, 35 nursery workers, 92 teachers, 69 community and youth workers, 70 club and nursery leaders and 37 medical professionals, all of whom reported that their understanding and approach to children's drawing had changed on the basis of the research presented in the survey. 179 said that they better understood that more than one emotion could be represented in children's drawings, and 178 said that they would behave differently when discussing emotional aspects of drawings with children. In a related way, 80 respondents indicated that they would ask different questions to better understand what children try to express and communicate – especially through asking 'more questions about what the drawing shows before assuming what [children] are feeling', so as to improve understanding and communication around children's drawings. 176 respondents reported that their understanding of how children express themselves differently when drawing for different audiences/in different contexts had improved, such as 'to consider the big picture, context, person, personality [and] how the environment effects the child/person they are interacting with'. 173 reported that they intended to talk more with children about their drawings, 'to be more inclined to ask questions and discuss the picture and what [the children] are communicating with them' (**C1**). Establishing longitudinally that these changes had been meaningful over time, 100% of respondents to a follow-up survey in March 2019 reported that they had sustained these benefits since answering the first survey (**C6**).

As a result of this work, Dr Burkitt's research has also been picked up and discussed by a range of media, and benefitted company advertising platforms internationally. In 2016, Burkitt was asked by Lelli Kelly, an Italian shoe company with global reach, to analyse user emotion and colour use for their new Colorissma shoe product (which came out in 2018). This study, published online by Kelly, was seen by 7,011 people by the end of the REF2021 assessment period (**C7**) and disseminated via a global Facebook Campaign between 07/08/18 and 02/09/18, reaching 250,000 viewers and resulting in 4,800 interactions (**C8**).

Improving approaches to emotion assessment among education sector professionals through mixed emotion graphs

Until recently, emotion assessment practices for children and adolescents have not incorporated measures of how different emotions can occur at the same time. To disseminate key findings about what types of mixed emotions children and adolescents experience, and to assess what additional benefits her graphing technique could bring to existing emotional assessment practices, Burkitt began a series of bespoke workshops in March 2019, sharing her research with 15 Special Education Needs Coordinators (SENCOs). While subsequent workshops were cancelled due to the COVID-19 pandemic,

she was nonetheless able to interview 9 teachers and learning assistants, and to circulate an online survey for educationalists.

As a result of these activities, 11 SENCOs said they would use the graph to supplement their emotion assessment work with children, helping them to process complex emotions (**C2**). They also noted that this technique would help the children and adolescents they work with to understand and communicate the complex emotional experiences they encounter (**C2; C3**). In addition to this, 14 teachers and learning support assistants said they would use the novel graphing technique in supporting children emotionally, because it could be child-led, of more interest to children than other methods, and 'flexible enough to be used about any event such as a negative incident or a difficult week that the child may need to understand and possibly talk about'. Over 80% of respondents across the workshops, interviews and survey said that the graph would help both them and the children to 'explore, understand and manage complex feelings' to a far greater extent than verbal/pictorial methods had hitherto allowed (**C2; C3; C4; C9**).

5. Sources to corroborate the impact (indicative maximum of 10 references)
Available on request:

C1. Survey database (2015-2019).

C2. SENCO database and written responses from survey (March-June 2019).

C3. Testimonial letter from Dr James Galpin, SENCO, Bridge School, London.

C4. Testimonial letter from Debbie Lovett, Learning Assistant, Steyning Grammar School.

C5. CDA archive analytics from UoC Marketing (2018-2019).

C6. Follow-up survey database (March 2019).

C7. Lelli Kelly analytics.

C8. Lelli Kelly Facebook analytics.

C9. Teacher and learning support assistant interview transcripts (July-November 2020).