Cornerstone VR in Education

April 2020

Part of the Antser Group

1. Contents

## 1.1 Acronyms

CVR: Cornerstone Virtual Reality
Wider educational professionals include: Teaching assistants, behaviour and learning support mentors, nursery staff, educational psychologists

2. Introduction to the Cornerstone Virtual Reality Programme

2.1 Cornerstone VR™ was born out of innovation and partnership, driven by a need to improve the life chances of children in the care system.

2.2 It was developed to use immersive technology, and film, to tackle the issues of adopter recruitment and training by the founders, both adoptive parents.

2.3 Initial evaluations indicated that this was revolutionary in social care and, as Cornerstone VR™ is more widely tried and tested, the more adaptable its use in the wider children's care sector becomes evident.

2.4 The interactive immersion enables parents; carers; teachers; social workers; judges; barristers; health professionals, and wider professionals to understand how trauma and abuse impacts upon children's development and behaviour.

2.5 As individuals, in our interactions with others we rely on the inter-relation of affect (feelings), behaviours (interactions) and cognitions (thought). Diagram 1 illustrates simply that if we are seeking to change behaviour, we must simultaneously change the individual's mood (attitude); the individual's cognitions (thinking); and create the right conditions (context - reduce stress and strains). If you provide a person with an experience that allows them to think differently and change their attitude - whilst reducing stress and strains - you can affect their underlying beliefs to secure long-lasting change.

Diagram 1
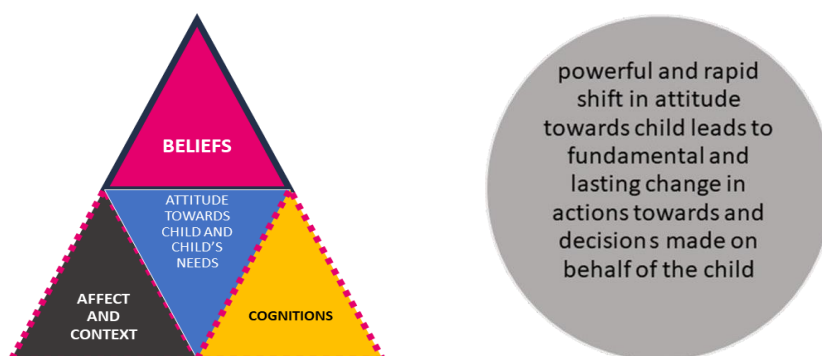
2.6 The evaluation (qualitative and quantitative) collected from users of the VR Programme shows that through using immersive VR, we can change an individual's thinking and interpretations of a child's behaviour. For instance, many professionals know that some children have had difficult early years experiences, but on occasions they do not connect the behaviour with past experience. Evaluations have shown that putting adults into the shoes of children - in VR experiences - impacts upon their affect, allowing them to 'feel' the impact, in new and profound ways. This experience provides new understanding and knowledge (cognition), as to how behaviour may develop as a result of a child's past experiences, consequently, impacting how professionals may feel about a particular child (and their behaviour), enabling them to respond differently.

2.7 A recent study shows that people understand, connect and remember things more when they are emotionally connected to the content. *"V-learners felt 3.75 times more emotionally connected to the content than classroom learners and 2.3 times*

more connected than e-learners"[1]. This supports our evaluation, which demonstrates that the Cornerstone VR™ Programme can accelerate an individuals learning which, in turn, leads to a greater chance of behaviour change.

3. Use of Cornerstone VR Programme in education

3.1 School is an important part of childhood, in providing both educational and social opportunities for children to grow and thrive. It can be an enormous resilience-building experience. However for children who have experienced trauma, school may be more difficult to navigate and their behaviour may present more challenges to staff.

3.2 In comparison to their peers, children in need and children in care are more likely to have a disruptive start to school, or join outside of the normal start period. They are also more likely to move schools. Children in care are also five times more likely than their peers to experience fixed-term exclusions, reflecting the potential levels of difficulty schools and staff may experience whilst managing their behaviour.

3.3 The use of Cornerstone's VR Programme in schools helps provide insight and understanding of early years' experiences and the home lives of some pupils. The VR experiences have been used in workshops with schools for groups of staff including teachers, classroom assistants and lunch-time assistants. The VR experiences aim to support understanding, promote empathy and encourage changes in the way staff members manage behaviour. The mission is to change perspectives, so school staff understand this behaviour as part of early-life trauma's legacy, rather than simple 'naughtiness'.

4. How we evaluate the efficacy of Cornerstone VR

4.1 Cornerstone uses meta-analysis, pooling data from our partners. The report will be updated as we gather new evidence but as at August 2020, this report captures data from November 2018 onwards.

4.2 Evaluations are integral to providing an objective evidence base for any product/service which seeks to make a difference. Cornerstone implements an evaluation strategy which uses feedback postcards to capture the use of the VR Programme and its efficacy in four key areas:

   a. **Understanding** – do adults understand how their behaviours and responses affect children?
   b. **Empathy** – do adults get an insight into a child's perspective?
   c. **Behaviour** – will adults think differently about their behaviours towards children?
   d. **Attitude** - will adults consider alternative ways to behave towards children?

4.3 Data is collected using the five-point Likert scale to measure the perception of changes in the four areas from the new user's perspective. The evaluation uses quantitative and qualitative feedback to measure the changes - in the short and long-term - in the above areas.

4.4 Independent evaluation has also been carried out: Alma Economics carried out a *Preliminary Evaluation of the Cornerstone VR Pilot Programme*; and Goldsmiths,

---

[1] https://www.pwc.com/us/en/services/consulting/technology/emerging-technology/vr-study-2020.html

University of London, are currently evaluating the use in domestic abuse programmes (April 2020).

5. Summary quantitative and qualitative findings

5.1 Cornerstone have worked in partnership with the education sector in various ways over the last two years, including certifying Virtual Schools in the use of VR, running trauma-informed twilight sessions and working on a macro-scale, too, delivering teacher training across Regional Adoption Agencies.

5.2 Please see below, for participants responses from several courses[2] run across the education sector, capturing the VR's tendency to produce changes, short and long-term, in understanding; empathy; behaviour and attitude[3].

5.3 Understanding (increased understanding in trauma and its impacts among teachers and wider education professionals):

- 98% of teachers agreed that the VR experience helped them understand how their behaviour/responses/decisions affect others

- 100% of teachers agreed that the VR experience helped them recognisethe link between a child's early experiences and current functioning.

- 100% of respondents improved their understanding of why children may present challenging behaviour at school.

> *"Impact training which will see reflections long after the training session has finished – outstanding".*
>
> *"Incredibly useful for anyone who works with children. Will make the difference for many kids".*

5.4 Empathy (increased empathy towards children and young people):

- 100% teachers agreed the VR experience gave insight into a child's perspective.

- 100% teachers were likely to manage children with challenging behaviour with added empathy.

> *"All teachers should be shown this VR, to develop and ensure empathy across the profession. It is a question of finding a way to offer this to every teacher; support worker; teacher; social worker across the country to ensure no barriers. A very useful experience".*

5.5 Behaviour (change in professionals' management of difficult behaviour in the classroom):

- 96% of teachers agreed they would consider alternative ways to behave/respond to children.

- 94% of teachers agreed to feeling more able to manage challenging behaviour in class.

---

[2] Summary data was extracted from 10 courses ranging from 8-22 participants in each course.
[3] Individual session findings can be found in the Evaluation: Using Cornerstone VR in Education – Event Log

- 96% of teachers agreed that the VR experience made them think differently about their behaviour/responses/decisions.

> *"Have a more patient and consistent approach".*
>
> *"Take a calmer approach in the first instance to try to regulate a child's mood/behaviour".*

5.6 Attitude (change in response to children and young people displaying difficult behaviour):

- 100% of respondents agreed to feeling more able to retain a child with difficult behaviour in learning situations.

- 100% of respondents were likely to reduce exclusion numbers after viewing the VR content.

> *"Has made me think about the impact of words and triggers not seen".*

6. Case studies

6.1 Below are two Case Study examples evidencing the use of Cornerstone VR in different ways across the education sector[3].

Case study 1: Developing Empathy to support D in School May 2019

D (an adopted child) was seen as a 'naughty child' at school. The headteacher was feeling particularly frustrated with D, as the school had tried a number of interventions when he presented challenging behaviour such as disrupting the class. D had another three years left at the school, and they could not see how they could continue to manage him and his behaviour.

The Post Adoption Social Worker (a Certified VR Practitioner) planned a session with D's headteacher and class teacher, using the VR to support them in thinking about D and his lived experiences. The session started off with re-visiting D's history and experiences, then explored what is known about the impacts of trauma, abuse and neglect on the development of the brain. The social worker linked this to D's potential as someone prone to feeling unsafe in certain situations at school. The VR was then used with the teachers and, after watching each experience, a discussion was held with the VR Practitioner about how the teachers felt after watching it, prompting them to think specifically about D's experiences and uniqueness. The VR Practitioner identified that the teacher's empathy for D was reinforced, as they reflected on his experiences being very similar to the experience showing a neglect from a child's point of view.

The school VR experiences and the three different approaches from the teacher were powerful for the headteacher and class teacher as they were able to reflect with each other and identify D's responses to various triggers. They were able to identify times when they perhaps had adopted responses - in their annoyance - which may have triggered him further (i.e. shouting or sending him to isolation), and how D had responded in a negative way on those occasions. They highlighted that D tended to freeze when they raise their voices at him in the classroom, and both came to their own realisation that this was likely a trigger for him, and was leading to further challenging behaviour.

By the end of the session, both teachers were very motivated to make changes to their approaches with D. They planned, in a practical way, how they could lead D to a quiet place when he was overwhelmed so they could have the type of conversation they saw the teacher having (e.g. the PACE style) in the VR. They also planned how they could ensure a teacher would remain with him whilst he calmed down, whilst also ensuring the rest of the class was supervised. They planned to hand over elements of the session to other staff who were working with D. The teachers found it really helpful to be able to see the different ways of responding to a child, modelled using the VR technology.

Using the VR to assist teachers in thinking about an individual child, their lived experiences and the impact of the trauma suffered, helped to prevent D's school placement from breaking down. This will enhance his resilience going forward as he is able to continue to learn in a supportive education setting. This supportive and consistent response is being replicated throughout this Regional Adoption Agency.

Case study 2: Developing trauma informed schools

'As part of their continued drive to support the schools in their Borough to become Trauma Informed Schools, a Family Support Team have used a Whole School approach to deliver the VR experience including receptionists, lunch-time supervisors, through to teaching staff. They will be replicating this model across their Borough to ensure that all school staff are Trauma Informed, which will support children in receiving consistent care and support.