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A small-n study using Qualitative Comparative Analysis (QCA) to understand the combination of factors that contribute to a rise in self-reported confidence in participants on a non-accredited pre-entry programme.

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TASO

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1 Introduction and context

1.1 The Lifelong Learning Centre

The Lifelong Learning Centre (LLC) at the University of Leeds has a widening participation mission. We engage in adult education and community outreach and recruit mature, part-time and foundation year students who we support throughout the student life cycle. The LLC has both educational and service offer provision and takes a holistic approach to integrate these two areas of activity. We run full and part-time undergraduate programmes, including apprenticeships, that target mature and foundation level learners from the UK.

Our Communities and Partnerships Team works locally and regionally with a wide range of community and voluntary organisations across the third sector and with the statutory sector, to raise awareness of routes into Higher Education (HE), develop sustained relationships and facilitate applications to study.

Through our contextual admissions process the LLC recruits students from under-represented backgrounds using several eligibility criteria such as postcode, school attainment levels and household income. Candidates who have been out of formal compulsory education for three years or more, as well as mature candidates who do not hold traditional qualifications, are eligible for the Alternative Entry Scheme (AES). This runs in conjunction with teaching schools at the University of Leeds and, in 2022, 116 students were supported through, and recruited via, this route.

A key part of our work is involved in relationship building through pre-entry activity. We run taster events to introduce study opportunities and information sessions, topics include 'student finance', 'studying as a mature student' and 'going to Uni'. We offer Impartial Advice and Guidance (IAG) from the first point of contact (pre-entry), through to post-graduation. We also run non accredited pre-entry provision, including our 8-week Jumpstart course, to help students gain practical experience of studying on-campus and online, prior to making decisions about applying for HE courses.

1.2 Jumpstart

The Jumpstart taster course is aimed at adults who are interested in higher education but do not have the knowledge or confidence to apply for a course within HE. It aims to provide an inclusive and transformative learning experience for adults on a university campus or through a hybrid mode, allowing space for adult learners to progress between adult community education and higher education.

The course was developed in 2011 as there was an identified gap in educational provision for adults from widening participation backgrounds, which prevented people interested in university understanding what HE study entails. The course is well established within the LLC's pre-entry offer and currently comprises 10 sessions run over 8 weeks, with an additional week taken for a trip to the theatre. The course is non-accredited and uses a range of face to face and online delivery methods. The course has been highlighted nationally as a model of good practice by the Department for Business and Innovation and as a case study for working with mature students by a Universities UK (OFFA, 2016) report on social mobility in HE.



▪ *1.2.1 Recruitment and approach*

Applicants for Jumpstart are recruited through an interview process. All the learners are from Low Participation Neighbourhoods (LPNs) in HE. The course is selective (based on the WP criteria of living in an area of low socio-economic status, having attended a school which performs below the national average and the learners' readiness for study). There are different entry routes for participants; these include word of mouth, referrals by partner agencies and adults studying for GCSE with partner colleges.

Jumpstart takes an approach which is rooted in the critical adult education tradition (Brookfield, 2017). The course content and methodology are student-centred and emphasise the importance of students' experience as a starting point to draw learning from. This gives value to the students' experiences, promoting inclusivity and increasing learners' confidence. The ideas of Paulo Freire (1993) are fundamental to the course aims and design. Using students' educational experience as a starting point, connections are made to broader contexts, providing an opportunity for learners to develop their critical thinking through understanding their own learning and experience. This includes exploring the socio-economic context of an issue, allowing the students to critique society and the power relations within it. This internalised learning is key to the students' development as adult learners and can lead to a transformative learning experience, enabling learners to recognise their personal agency and become more active within their communities.

The course design includes a scaffolding approach to learning and the course syllabus provides a range of different curriculum areas for learners to try. These represent the broad subject areas of science, social sciences and arts and humanities. Each subject session builds on the next in terms of theories and ideas which run throughout the course, so that the learners have the opportunity to develop their critical thinking skills through multi- and inter- disciplinary approaches. As well as exploring issues using critical thinking skills, learners have the chance to develop other academic skills such as essay structuring, writing and maths.

The theme of education and learning is interwoven throughout the course, linking to the individual subject sessions. A range of methods and materials allow the students to explore issues and their own experiences from different perspectives and using different technologies. For example, creative pedagogies, including participatory photography, allow the learners to explore a subject from their own perspectives (Clover, 2006). A trauma-informed approach is taken in all aspects of the course. This approach has been seen as increasingly important and a means of ensuring the creation of safe learning spaces where traumatized learners can re-shape their learner identity (Wartenweiler, 2017).

The course outcomes focus on the participants' understanding of the learning process; the development of critical thinking skills such as questioning, reflection and learning from each other; as well as the development of an HE student identity and the increased confidence this brings, rather than prizing a particular type of knowledge.

Educational guidance and planning are integrated throughout the course and the LLC's guidance staff work closely with the course leader. Our pre-entry guidance service generally uses the 'Planned Happenstance' model (Krumboltz, 2009) and Egan's 'skilled helper' model (Egan, 2014) as well as applying Rogers' (Rogers et al, 1990) 'matching theory' where appropriate with participants.



2 Evaluation context

o 2.1 How we evaluate our work

Our work aims to be inclusive and collaborative, based on sound pedagogic and community engagement principles, informed by ongoing scholarship in the education of adults. We commit to an ethos of student-centred working and our work has developed over the years to respond to local community needs and the broader contexts of austerity and deprivation which impact our partner organizations. Our framework for pre-entry activity distinguishes between developing long term relationships with those who are further away from making education decisions at the point of initial contact, through supporting learners who are inclined towards study but unsure of the next steps, to working with those who are at the point of considering education options. The Jumpstart course is designed to move people from being unsure of next steps to the point of application (wherever that may lead). Our sense of ‘what works’ for different learners relies heavily on reflective practice and collaborative engagement and the challenges of formally evaluating this work are myriad (TASO, 2022).

Our evaluation and research activities for our interventions, include surveys, focus groups and a 5-year longitudinal study using semi-structured interviews and life mapping. We integrate theories of change into our intervention design activity and work closely with the university’s Strategy and Planning Group who produce institutional and sector wide data to inform our practice. We also work closely with the university’s schools outreach team (Education Engagement) and the Student Success Unit to share best practice and disseminate our work.

We can produce strong narratives for our provision, and we regularly produce case studies of our work. We routinely collect, and respond to, feedback from students via pre and post intervention surveys and we collect data on access, continuation, attainment and progression, but we have not been able to resource consistent in-depth empirical enquiry. Over the previous eight Jumpstart sessions, we have tracked about 50% of the participants making applications to the University of Leeds, with 65% of these starting a course. Like others in the sector, we struggle to make causal claims about the direct impact of activities (TASO, 2022; OFS, 2021a) and small numbers and restrictions on resources mean that quasi experimental approaches are not within our grasp. The Transforming Access and Student Outcomes (TASO) small-n evaluation project funding offered us an opportunity to engage in supported, structured impact evaluation which appeared more suited to our cohorts of students. Crucially, we did not want to subject participants to overly intrusive data collection which might negatively impact their desire to engage.

o 2.1 Jumpstart Evaluation

In 2020/21 and 2021/22 we focused some of our evaluation work on the Jumpstart programme, including the collection of pre- and post- course questions that asked about confidence to study in Higher Education. We designed this to be relatively light touch so as not to impact negatively on students’ perceptions of themselves as learners.

▪ 2.1.1 Problems of measuring confidence

Self-reported confidence measures are routinely critiqued for being imprecise and unreliable. Asking participants to rate confidence on a simple scale is clearly problematic, since there is no clear definition, or shared understanding, of what is meant by confidence in this context (Norman and Hyland, 2003). When attempting to understand whether adults perceive themselves as currently in a position to study in Higher Education, the question we chose seeks to replicate the type of exchange which is routinely part of discussions to probe readiness to apply, without triggering a fall in



confidence that would undermine the students' readiness to study. This locates the confidence being rated as situational.

Weaknesses in self-reported confidence measures have led researchers to gather data through more developed metrics, which attempt to unpick self-esteem and self-concept, often in relation to particular learning activities. We would contend that adults who are yet to re-engage with formal educational settings and who may have experienced negative and traumatic educational interventions in the past (Jumpstart participants), could potentially experience this type of data collection as intrusive, judgemental and undermining, diminishing the very confidence that the tool is attempting to measure.

An additional criticism of self-perception reporting is the possibility of the Dunning-Kruger effect which indicates a metacognitive inability to accurately assess the reported measure against the objective reality (for example, the results in a test score) (TASO, 2022). However, in asking participants on a course to express their pre and post confidence measures we are not seeking to establish an objective level of readiness to apply to HE or a verifiable assessment of competence to study in HE, rather we are attempting to understand whether the individual feels they are ready to apply or ready to study at HE level. Whether they are, or not, is not measurable or verifiable. Whether they do apply, or not, might be one outcome of the course, although not the only outcome that is desirable.

▪ *2.1.2 Jumpstart self-reported confidence measures*

Two cohorts of Jumpstart participants (Autumn 2021 and Spring 2022) were asked to self-report their confidence to study at university before and after two Jumpstart programs (each course had a total of eight sessions) on a Likert item; this data was subsequently processed to determine whether there was a statistically significant difference in the self-reported means, or 'distance travelled'.

A one-tailed, paired samples T-test was performed on the data, with the alternate hypothesis that participants will experience improved confidence to study at university following Jumpstart. The paired difference scores were analysed using a Shapiro-Wilk test to be approximately normal.

There was a significant increase in participants' self-reported confidence to study at university following Jumpstart before ($M = 3.1, SD = 1.0$) and after ($M = 3.9, SD = 1.0$) Jumpstart, $t(23) = 2.9, p < 0.5$; the Wilcoxon signed-rank test, which assumes non-parametric data, also reports a significant difference.

Figure 1 shows that participants' self-reported confidence generally grew following Jumpstart, while Figure 2 demonstrates how most individual participants (63%) reported an increase in confidence.

Finally, Figure 3 shows that participants tended to attribute an increase in confidence to Jumpstart. Further work will attempt to build a more complex relationship of factors contributing to an increase (or change) in self-reported confidence of participants.

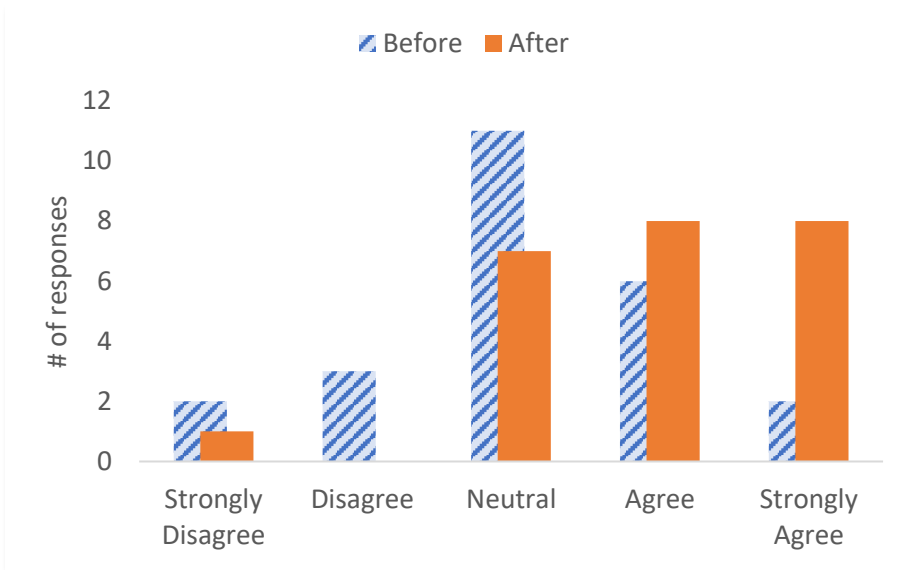


Figure 1. Count of participants' responses to 'I feel confident about academic study at university', before and after Jumpstart.



Figure 2. Direction and magnitude of paired responses (before to after) to the question 'I feel confident about academic study at university'. Labels are anonymised.

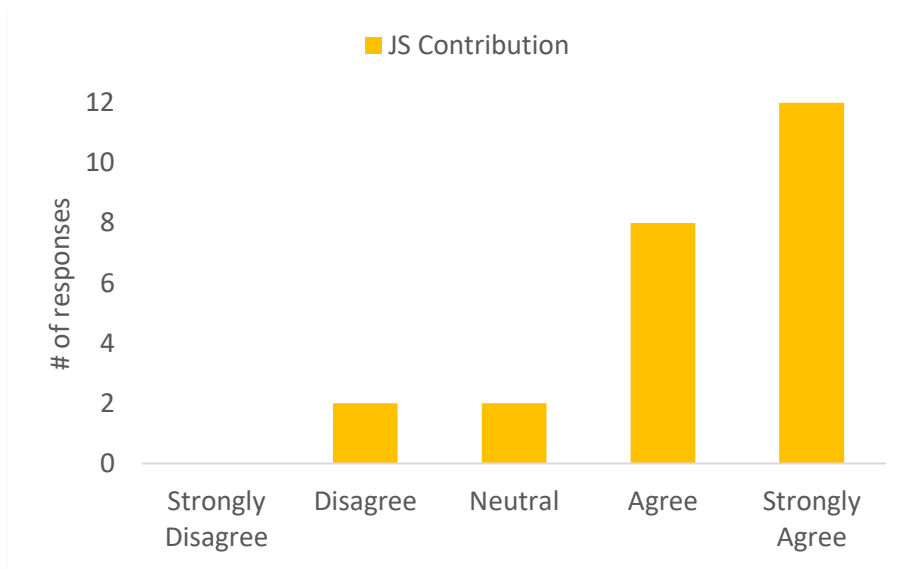


Figure 3. Count of participants' responses to 'Jumpstart has made me feel more confident about academic study at university' following the conclusion of Jumpstart.

- 2.2 The current evaluation

Having established an apparent shift in confidence over the Jumpstart course we wanted to understand further what configuration of factors might contribute to positive increases in confidence. There are many factors at play in the process of accessing a course, attending sessions, engaging with peers, interacting with teaching staff, drawing on support and developing a relationship with a large, formal institution. Rather than treating these factors as variables to manipulate, we set out to understand the configuration of experiences that might contribute to an increase in confidence over the Jumpstart course, in order to better understand the relationships between our programme design, the participants we recruit to the course and the outcomes experienced. We are exploring the 'causes of effects' in the assumption that a rise in confidence is multi-causal (TASO, 2022).

- 2.3 Theory of Change

With the successful bid for TASO funding, and with support from colleagues at TASO, we embarked on a mid-level TOC, incorporating change mechanisms between the individual sets of activities and stated outputs and outcomes.

The TOC was developed through discussions which took place over a number of meetings with the practitioner delivering Jumpstart and other colleagues working in outreach and support activities across the LLC. The discussions were led by the Management Information Analyst in the LLC. A visualisation of the Theory of Change can be found in the [appendices – 11.1](#).

3 Aims

The key aim of this pilot evaluation is to build on our current evaluation practices for Jumpstart, by making use of QCA with expert guidance, to gain a better understanding of the configuration of factors that contribute to participants' rise in self-reported confidence, so we can continue to improve our services. Lessons learnt will be applied to other outreach activities and student success interventions.

The objectives are to explore the QCA approach to:



- Better understand the contributing factors to students' changing perceptions of Higher Education as a realistic choice for them.
- Identify the (combinations of) conditions under which beneficial outcomes occur, as well as the conditions that appear to create barriers for students.

4 Brief literature review

The pre-entry Jumpstart course is built on assumptions supported by research that aspirations, and more accurately the realisation of aspirations, as well as informed choices, are key to fairer access to higher education. This is not the same as having a focus on aspiration-raising, which implies a deficit model (Harrison & Waller, 2018).

Adult learners are not a homogenous group and they bring unique perspectives to their individual relationships with education, their learning journey and their perceptions of higher education, which often change over time (Fowle, 2022, Kantar Public & Learning and Work Institute, 2018). In 2001 Michie et al. identified that complex inter-relationships of factors contribute to individuals' perceptions and experiences of higher education and this complexity is discussed in other work in the field, including in policy documentation (OFS, 2021b) empirical work carried out in the UK (TASO, 2021; Fowle, 2018; Butcher, 2017; Reay, 2003) and theoretical work focusing on broader international contexts (Nicolaidis & Marsick, 2016).

Using the literature, we identified key factors that appear to impact mature learners' readiness to apply to higher education and their confidence in making applications to study at this level. These factors appear to contribute to an individual's propensity to engage with higher education at any particular moment in their life and have informed our approach to recruiting to the Jumpstart programme. They are briefly outlined here, to set the context of the Jumpstart course and the small-n evaluation discussed in this report.

In a review conducted by TASO in 2021 the majority of evidence related to work with mature students is characterised as 'weak', 'descriptive' and 'exploratory' (TASO, 2021). Nevertheless, themes identified in the literature as impacting adult learners are consistent with our experiences over more than 20 years of working with mature students in, and before they enter, higher education settings.

4.1 Previous experiences of education

The literature review conducted for TASO in 2021 on mature learners cited a number of studies which reported the impact of previous experiences of formal education on adults' perceptions of higher education as 'not for them' (p.9). These qualitative studies suggested adult learners' experiences of previous education can range from regret to hostility; emotions which contribute to heightened anxiety when considering higher education study. A gap in study can also reduce confidence in capacities to study in formal education settings, especially at HE level and Gorard et al. (2006) assessed the literature as showing that participation in post-compulsory education is more likely amongst those who are already confident in education settings and is linked to a complex configuration of factors including socio economic status, location and employment status.

4.2 Outreach activities and Impartial Advice and Guidance (IAG)

The role of outreach activities and impartial advice and guidance (IAG) in enabling individuals to make informed decisions has been emphasised in recent studies (Centre for Social Justice, 2022; OFS, 2020; Kantar Public & Learning and Work Institute, 2018; OFFA, 2016). However, the nature of



IAG requires careful consideration (Regan & Bhattacharya, 2022). A review funded by TASO (Robinson & Salvestrini, 2020) found that IAG can have a low cost, but small impact, on decision making for those who are disadvantaged. However, the majority of these studies, which used randomised control trials, were conducted with school and college students and included studies from the US and Germany. There is some evidence that there is a greater impact from information giving for students studying in large Further Education Colleges in the UK (Burgess et al, 2018) which might include adult learners, although the age and life stage of participants is not clear from the information provided. The definition of advice and guidance is broad here and includes information campaigns and talks delivered by student ambassadors. Robinson and Salvestrini (2020) draw the conclusions that advice and guidance need to be personalized and tailored to the individual.

4.3 Personal circumstances: Caring, Social Support, Mental Health and Trauma

Personal circumstances, including caring and domestic responsibilities have been identified as common 'situational' factors that influence decisions to engage in learning opportunities (Hall et al., 2021) and 'distractors' from education (Busher & James, 2018, p.643). These situational factors appear to affect women more than men, and the least affluent, and are cited more by those considering, or engaged in education, than those who are not, who tend to cite dispositional barriers (Hall et al., 2021). In in-depth qualitative studies using interviews with small samples of mature students, women have identified complex relationships with caring and domestic responsibilities, especially children and childcare, which are identified as both drivers to study and barriers to accessing education (Busher & James, 2018; Mannay and Morgan, 2013; Scanlon, 2009; Bolam & Dodgson, 2003; Reay et al., 2002; Davies et al., 2002). For an explanation of how we developed our use of this particular attribute in our analysis, see appendix 11.2.1.

Social support is recognised as a potentially powerful factor in helping students to engage in studies and succeed. Social support and social networks are identified as being significant both practically, providing childcare for example, and psychosocially through relationships that help to create a sense of identity (Domingo, 2016). However, there are few empirical studies that have explored social support specifically for mature students in the process of making decisions to access higher education and how these support mechanisms can offset the demands of caring and domestic responsibilities. Although focused on young students, in a systematic review of literature related to social support, social capital and social networks, Mishra (2020) found that social support was significant for minoritized and under-represented students in persistence in their studies. Yosso's (2005) work on community cultural wealth emphasizes the importance of the assets that are available to individuals and warns of the dangers of reframing these as deficits.

The relationship between adult learning and mental health is often referred to in the literature. Swain and Hammond (2011) conducted a 2-phase enquiry with mature and part time students studying in a UK Higher Education Institution, using a questionnaire and follow up interviews with 18 participants, some of whom were studying second degrees. They identified mental health issues as a constraining factor for some interviewees. Schuller et al. (2004) drew on interviews with 145 adult learners, alongside the data from large datasets to conclude that mental health can both be transformed and sustained through learning engagement and that this impacts both individuals and, more broadly, families and communities. Hammond (2004) identifies from the literature that specific features of learning which can contribute to better health outcomes include improvement in socio-economic context, improved communication and 'emotional resilience'. Working with data from interviews with 124 individuals and 12 group interviews Hammond (2004) suggests that subjective wellbeing, coping with physical ill health and transforming experiences of mental ill health, as well as sustaining mental wellbeing, were all linked to learning (Hammond, 2004).



In addition to considering the relations between learning and mental health, there is a growing literature on the impact of trauma on learning (Perry, 2006) and the development of trauma informed education (Daniels, 2022; Wartenweiler, 2017). This recognizes the impact of experiences of trauma on learner identities and capacities to engage with learning environments. Although a number of different approaches are discussed, often in children's and prison education and outside the UK, the acknowledgement of an explicit pedagogical approach that is relevant for all learning environments, alongside the commitment to create safe spaces for learners, is common in much of the literature.

4.4 Confidence

The development of confidence is a common theme in the literature on attracting adult learners back to education and widening participation. Confidence is a slippery term that is often discussed as a combination of factors including self-efficacy and self-esteem, which are more precise in their definitions. Both these constructs have been differentiated from, and interwoven with, confidence as a concept (Norman and Hyland, 2003). Self-efficacy is associated with a particular task (Thomson et al., 2022) and self-esteem with having positive or self-deprecating self-perception, which relates to ideas about capability and/or ideas about personality (Lawrence, 1999, cited in Norman & Hyland, 2003, p.265). From their recent research on confidence, Kenyon et al., (2022, p.17) suggest 'that confidence is a product not only of belief in oneself, but also trust in learning institutions and in social support'. Processes that contribute to the development of self-efficacy and self-esteem through learning are core to our development of the Jumpstart programme, as well as understanding the role of institutional and societal factors in impacting individual confidence to study.

The psycho-social resources that Hammond (2004, p.41) identified as mediating improved health, including mental health, were 'self-esteem and self-efficacy; identity; purpose and future; communication and competences; and social integration'. Hammond's (2004) findings suggest that these relationships are often indirect and complex and that the configuration of factors at play are difficult to unpick and do not lend themselves to investigation as 'variables' that have clearly identifiable causal impact. Negative outcomes of learning were also reported in this work, including respondents not being able to learn as expected which had a negative impact on wellbeing (Hammond, 2004).

These factors, which we focused on in this study, were those which we had used ourselves in developing the Jumpstart programme over a number of years, based on pedagogic and professional development, experience and interactions with students.

5 Jumpstart – October to December 2023

5.1 The cohort

Twenty-three students (9 men and 14 women) registered on for the course, after interviews, and 20 people attended the first session. The group was very diverse having a range of ethnicities. Ages ranged from 18 to 63 years old, with an even spread of ages across people in their 20s, 30s, 40s and 50s. The participants lived in Leeds or surrounding areas including Bradford and Huddersfield (the majority living in Leeds). Nearly all lived in areas of low participation of HE. All participants had few or no qualifications.

Attendance was maintained at 17/18 people attending, although there was a dip halfway through the course. Attendance then climbed back up to a maximum of 17 people at the end of the course.



74 % of people who started the course finished. This is above percentages given for achievement in community education over the last five years (Explore Education Statistics, 2023).

5.2 Reflections on the course and the scheme of work

5.2.1 Reflections from the practitioner

The project has provided an opportunity to analyse the practice which I have built up over the years as an adult education practitioner. I have reflected on the importance of building a rapport immediately to establish trust with an adult returning to education and the skills required to do this. Active listening and a non-judgemental attitude as well as sensitivity and tactfulness are key. Experience and understanding of people’s backgrounds often guide me on how to communicate.

The prompts used for the initial interview were useful to think about how I could deepen the process, however, gathering information about participants for the research in a sensitive, empathetic and appropriate manner can be a delicate process as it is dependent on what information the participant wants to share. The practitioner cannot push for information that does not fit into the natural conversation, otherwise the experience could be negative for the participant and destroy any trust built, resulting in the participant deciding that the course is not for them or not participating fully.

Jumpstart course interviews are now carried out on the telephone (before the pandemic, they were in person) and it can be challenging to build a rapport and ask people about sensitive information without meeting them in person. In addition, it is sometimes the case that people are doing other activities which demand their attention such as driving or looking after their children and I have to be sensitive to people’s time constraints and demands.

Taking part in this evaluation project has provided an opportunity to consider further how to support students draw out their reflections and understanding of their skills and how they view themselves as learners. The additional sessions were valuable in providing a space for this.

5.2.2 Jumpstart scheme of work October-December 2022

Duration: 8 weeks in total - 6 weeks from 12 October – 23 November with extra 2 weeks for reflections and guidance support on 30 November – 7 December.

Multi-modal delivery: hybrid model allows students to attend in person or online if needed.

Joy of Maths course: 6 sessions - Oct 18 –Nov 23.

Plan of sessions

Date/session number	Aim	Subjects covered	Practitioner's reflections on each session
Interviews	Individual interaction over the telephone to establish the	<ul style="list-style-type: none"> Why someone wants to do JumpStart Wider concerns 	Challenges of establishing trust while asking sensitive questions. Mental health issues and learning disabilities seem common themes – the longer term results of the



	<p>appropriateness of the programme at this time. Research consent</p>	<ul style="list-style-type: none"> • Questions about university study • What next... 	<p>pandemic's isolation evident. Several discussions of undiagnosed learning disabilities + other issues which can make learning more challenging e.g., Dyslexia, ADHD & Autism.</p>
<p>12/10/22 Session 1</p>	<p>Pre-course confidence</p> <p>Introduction to course Reflect on positive learning experience Group building and</p>	<ul style="list-style-type: none"> • Introduce the course • Hear learning champions'* stories • Creativity activity • Start to reflect on previous learning experiences • Think about how we learn *Learning Champion mature student ambassadors 	<p>Learning champion themes that resonated with participants: mental health issues including suicidal ideation, homelessness, addiction & learning disabilities. One participant later told me they stayed for the rest of the course because a Learning Champion had been through similar situations as them. They were able to speak to them at the end of the session and they encouraged the participant to stay. Group enjoyed activities – visibly more relaxed at end of session.</p>
<p>15/10/22 Session 2 Saturday session</p>	<p>Agree group contract Group building Get to know the campus Have lunch in students' union Padlet</p>	<ul style="list-style-type: none"> • Ground rules using Lego • Group building • Importance of questioning & respectful debate – Socrates' values & method • Introduce padlet • Lunch in refectory 	<p>Great discussion on importance of questioning & how formal school education conditions people into a certain way of learning and how we relearn how to learn through adult education.</p> <p>Great group building through Lego activity, people starting to share previous educational experiences with the group & think about educational contexts + lack of support at school – i.e., Reasons why they didn't succeed at school. Good discussion of Growth Mindset adding to this + students' perceptions of themselves as learners.</p> <p>Also some sharing mental health experiences: 2 people shared with each other that they both suffered from agoraphobia & both didn't leave the house for 3 years. Supportive group dynamic starting to be built up.</p>



			Lunch in the Students' Union gave time for people to informally chat and get to know each other. Some of the group - from very different backgrounds to each other starting to bond.
19/10/22 Session 3.	Business management : marketing + introduce Photovoice project & padlet	<ul style="list-style-type: none"> ● Understanding and influencing buyer behaviour ● Group debate ● Introduce participatory photography project + Photovoice as a research method. 	<p>Group enjoyed marketing session – all contributed.</p> <p>Good participation in group debate, noticeable that individuals feeling more confidence to give their opinion.</p>
26/10/22 Session 4.	Sociology: theories of the city & power Library tour	<ul style="list-style-type: none"> ● Think about the idea of power, what it means and who has it ● Think about different kinds of power ● How do the powerful hold on to their power? ● Develop active listening and critical thinking skills ● Library talk and tour, library cards 	<p>Excellent group discussion- people shared their own experiences relating to Gramsci's theory of hegemony e.g. growing up during the Troubles in Northern Ireland, transitioning in a Catholic school, being an asylum seeker in the UK & experiences of the hostile environment, experiences of prison and drug addiction, growing up in a household where girls were expected to dedicate themselves to housework and marry early rather than study further.</p> <p>Excellent sharing of experiences, active listening with great mutual respect + good critical discussion.</p> <p>Group enjoyed library tour + pleased with library cards.</p>
2/11/22 Session 5.	Theatre trip: <i>The shadow whose prey the hunter becomes.</i>	Themes: disability, social model, assumptions about disability, AI, different perspectives	Disappointing attendance (about ½ the group) I may not have spent sufficient time discussing the play beforehand & probably daunting for people. Also some people have had to leave the course at this point for a variety of reasons e.g., a family member being unwell, work commitments, mental health illness returning and Covid. I have



			been in touch with as many as possible.
9/11/22 Session 6.	Arts & Humanities: Renaissance Portraits Visual critical analysis	<p>What is a portrait?</p> <ul style="list-style-type: none"> • What can a portrait tell us about history, society and culture? • How can we analyse it? • Characteristics? • Purpose? • Historical record? • Truth, reality? 	Group really enjoyed this session. All took part actively in visual analysis of portraits: group reflections showed gaining confidence as had surprised themselves by how much could contribute to the discussion. Some excellent creative writing homework - students reflected on how they see themselves & are seen by others. Allowed them to visualise their goals.
16/11/22 Session 7	Chemistry: sustainable chemistry & recycling fabrics	<p>Sustainable chemistry</p> <ul style="list-style-type: none"> • Recycling background • Consider the challenges to recycling clothes • The role can Chemistry play in recycling fibres • How to change people's behaviour to be more sustainable 	People enjoyed discussion on recycling but group dynamic slightly off as 1 student had a great interest in the topic and had great deal of knowledge to share whereas others didn't so much. I was supporting the online students via Zoom this week & it was challenging to support the science teacher to manage classroom discussions whilst doing this.
19/11/22 Session 8 Saturday session	Photojournalism and the power of imagery; 'to shock or not to shock'	<p>Exploration of the power that images possess to create 'journalistic impact'</p> <ul style="list-style-type: none"> • Consider image of visual images = how they are used in the media. • Lunch in refectory 	Excellent discussion. The student who had contributed a great deal last week, sat at the back and raised their hand to make points – I think they had reflected from previous session. Whole group showed a lot of respect for each other and the level of trust within the classroom deepened. 1 student shared that they had been brought up in a racist household and had held racist views until they had undergone drug rehabilitation which had allowed them the time to reflect and consider their values. To be able to say this to the whole group was an indication of the level of trust. Some students explored campus together after lunch.
23/11/22 Session 9	Photovoice session. What does	Students present their photos and thoughts on why they choose them.	Powerful sharing of experiences & peer learning. E.g. student who was very quiet to start with



	education mean to me?	<ul style="list-style-type: none"> ● Active listening & critical reflection ● Peer learning; Sharing experiences and knowledge. 	<p>became one of the most confident - through the Photovoice project - they posted a hand drawn self-portrait describing their life experiences + mental health issues. This opened up a great deal of discussion on mental health as a whole. The gratitude to that student + relief in the room was evident. Prompted feedback from group - <i>helped them be person centred, to see the person and see the value they bring to the sessions.</i></p> <p>Clear confidence increase, e.g., 1 student stood at front + presented photos to group – 1st time had spoken to whole group + 1st positive experience of education (now in their 60s).</p> <p>Some students struggle with using Padlet- may build in more 1:1 support with this in future.</p>
Individual tutorials. Completed before 30/11/22	Individual discussion on the course including feedback. Completion of action plans	<ul style="list-style-type: none"> ● Discussion of progress and reflection opportunity ● Discussion about applying to HE ● Informal advice and guidance and signposting to finance and IAG. 	Students individually reported enjoyed course and feeling more confident. Most said enjoyed all sessions, even if less interested in some subjects than others. All recognised development of critical thinking skills. Individual session allows me to discuss group dynamics with some students + help reflect on how this is part of learning in a group.
30/11/22 Session 10 (Additional week 1)	Reflection on skills & confidence. Peer coaching Post course confidence	<ul style="list-style-type: none"> ● Reflect on Jumpstart + identify your skills ● Practise coaching skills ● Practise active listening skills ● Giving feedback ● Identify skills for personal statement and /or job 	<p>Recap of course showed that students remembered key aims + ideas e.g., critical thinking skills, confidence, theory of hegemony.</p> <p>Group work on skills took whole lesson as students had so much to say. Showed deep understanding of skills e.g., <i>Opening up knowledge and curiosity to want that knowledge, willingness to have our minds changed.</i></p> <p>Group asked for extension to library cards: some reported they</p>



			regularly used the library and enjoyed the space.
7/12/22 Session 11 (Additional week 2)	Action plan Certificates Celebration Advice and guidance officer Finance & student support officer	<ul style="list-style-type: none"> ● Reflect on skills from last week’s discussion ● Reflect on confidence and ideas about what constitutes confidence ● General questions about HE ● Action plans ● Celebration ● Library cards ● Certificates 	<p>Celebration + students gave final reflections.</p> <p>Helpful to have guidance + finance colleagues at session for further detailed questions.</p> <p>Excellent group discussion on confidence + what it means to them. Lots on self-belief and feelings + actions to develop confidence.</p> <p>Closing of course with certificates, photo + letter to self.</p> <p>Students will stay in contact for help with UCAS applications etc.</p>

6 Method

6.1 QCA

Qualitative Comparative Analysis (QCA), originally formulated by Ragin (1987, 2014), aims to articulate a *recipe*: which explains individual contributory factors and the combinations of these resulting in a particular outcome. For this project, the outcome we sought to explain was differentials in the change in Jumpstart participants’ self-reported confidence, ΔC ; specifically, how these might be explained by intrinsic and extrinsic factors affecting Jumpstart participants. The method is inherently case-based and assumes complexity in the interaction of these factors leading to various outcomes; a number of factors may be systematically compared across the cases to determine which of these are consistently associated with a particular outcome, allowing for claims of causality (Befani, 2016). A practical introduction to the method and step-by-step implementation is provided in the Applied Social Research Methods Series’ Configurational Comparative Methods: Qualitative Comparative Analysis (QCA) and Related Techniques (Rihoux & Ragin, 2009); the attached case-study outlines our application of QCA to this evaluation project.

6.2 Attributes

The following attributes were included, based on a combination of literature review and practitioner advice, in our exploratory QCA:

- Time out of education (1a)
- Previous experience of education (1b)
- Engagement with IAG (2a)
- Engagement with other outreach activities (2b)
- Caring responsibilities (3a)
- Support network (3b)



- Ongoing experience of trauma (3d) - **Note the use of the term ‘trauma’ throughout this report is shorthand for significant disruptive experiences having an ongoing impact at the time of Jumpstart and is NOT indicative of a diagnosis, although some participants did discuss interventions and diagnoses.**
- Mental health difficulties (3e)
- Attendance on Jumpstart (4a)
- POLAR4 quintile (5a)
- IMD quintile (5b)

The output measure was selected as ΔC : the change in self-reported confidence pre- and post-intervention as part of an empirical inquiry (OfS, 2019). Despite limitations, self-reporting remains a popular method of data collection (Robins et. al., 2007), and has been employed due to its practicality and the prevalence across the HE outreach sector. We followed best practice in terms of neutral question design, and the addition of a second question asking ‘whether Jumpstart contributed to... confidence increase’ (all respondents either agreed or strongly agreed with this statement). Noting the limitations of this methodology, we aim to analyze the similarity of responses across different cohorts to build a metric for validity over time, and to investigate the incorporation of more complex and multi-faceted questionnaires as a proxy for ‘confidence’. As noted above, we also dedicated part of the final Jumpstart session, after receipt of the post-questionnaire, to hold a reflective discussion with participants on “confidence and... what constitutes confidence” – which will inform our evaluation moving forward. In order to build comparable data, we will strive to maintain the status quo for the next Jumpstart cohort and incorporate these developments in the proceeding sessions.

6.2.1 Calibration

The output (ΔC , or change in confidence pre- and post-intervention) was calibrated as crisp-set, where 1 (high membership in the outcome of increased confidence) was a positive ΔC , and 0 (low membership) included both no change or negative change. Of the total 14 cases included in the standard analysis, 10 were calibrated as 1, the remaining 4 as 0.

Table 1 below notes our approach to calibrating each of our (sub-) attributes. Starting with only crisp-set analysis, we soon incorporated a variant of fuzzy calibration to two of the (sub-) attributes; noted below.

Crisp-set calibration is the simplest employed in QCA and is used to determine whether a case has a presence (=1) or absence (=0) or a certain attribute or condition. Fuzzy-set calibration introduces more nuance, with a continuous sliding scale between 0 and 1 (Ragin, 2009). The term pseudo-fuzzy is used here to label two calibrations which were either done manually (formula shown), or where the raw data simply exists as a percentage (thus, with extremes of 0 and 1).

We opted for crisp-set calibration for the majority of the (sub-) attributes due to simplicity; as noted above, this is the first application of QCA for evaluation at the Lifelong Learning Centre. The two exceptions are explained here. The first, ‘engagement with other outreach activities’, was calibrated by normalizing the extremes between 0 and 1 (a variant of fuzzy calibration, as noted earlier) because we had strong evidence from previous internal analysis which showed a notable increase in the likelihood of application to HE where individuals engaged with more than one outreach activity compared to those who only attended a single event/activity – and we were keen to incorporate this distinction into our analysis with the use of weighted sums. The second, ‘attendance to JS’, reflects



our aim to incorporate practitioner-informed input that each session of Jumpstart (partly or wholly) builds on the previous, so that each extra attendance is theorized to contribute to the presence of an increase in confidence. This clouds possible differentiation between each step-change, though we note later our intention to consider more traditional calibration techniques for this attribute in future iterations of this work.

Table 1. Calibration of (sub-) attributes.

(Sub-) Attribute	Calibration type	Data type and collection	Coding formula	How the threshold was determined/Rationale
Time out of education (1a)	Crisp	Quantitative, numerical; self-reported during interview/program; GCSEs used as date for last formal education;	If time out of education < 10 years, Then 1a_c = 1, Else = 0	The gap of 10 years was derived on advice of Jumpstart (JS) and other outreach practitioners. Additionally on good practice basis that it split our data nearly evenly.
Previous experience of education (1b)	Crisp	Qualitative; Practitioner notes;	If observe positive adult education experience OR continued engagement with education, Then 1b_c = 1, Else = 0	Based on lit review and practitioner and evaluation team inputs on value of persevering with engaging with education.
Engagement with IAG (2a)	Crisp	Quantitative, numerical; Internal database recording interactions with IAG service (therefore limited only to interactions with University of Leeds)	If attended an IAG session in the current year (2022), Then 2a_c = 1, Else = 0	Based on lit review and inputs from JS and other outreach practitioners (including IAG stakeholders) and evaluation team advice.
Engagement with other outreach activities (2b)	Crisp	Quantitative, numerical; Internal database recording interactions with	If attended an Outreach activity, Then 2b_c = 1, Else = 0	Based on lit review and inputs from JS and other outreach practitioners and evaluation team advice.



	Pseudo-fuzzy	IAG service (therefore limited only to interactions with University of Leeds)	<p>Normalized weighted sum.</p> $2b_f = \text{normalized}_{0-1} (1 \times 2a_{2022}) + (0.5 \times 2a_{<2022})$ <p>Weighting</p> <p>1x for one or more activity in the current year (up to a maximum of three activities)</p> <p>0.5x for one or more activity in previous years (up to a maximum of three activities)</p>	Internal cross-tabulation analysis showed increased occurrences of application when individuals engaged with more than 1 outreach activity.
Caring responsibilities (3a)	Crisp	Qualitative; Practitioner notes	<p>If <i>don't</i> observe presence of caring responsibilities,</p> <p>Then 3a_c = 1,</p> <p>Else = 0</p>	Based on lit review and inputs from JS and other outreach practitioners and evaluation team advice.
Support network (3b)	Crisp	Qualitative; Practitioner notes	<p>If observe presence of support network,</p> <p>Then 3b_c = 1,</p> <p>Else = 0</p>	Based on lit review and inputs from JS and other outreach practitioners and evaluation team advice.
Experience of trauma (3d)	Crisp	Qualitative; Practitioner notes Due to sensitive nature of this attribute, it was not specifically queried, rather only based on practitioner observations	<p>If observe ongoing presence of trauma AND no known evidence of this trauma being mitigated,</p> <p>Then 3d_c = 1,</p> <p>Else = 0</p>	<p>Based on lit review and inputs from JS and other outreach practitioners and evaluation team advice.</p> <p>Note the use of the term 'trauma' throughout is shorthand for significant disruptive experiences having an ongoing impact at the time of Jumpstart and is NOT indicative of a diagnosis, although</p>



				some participants did discuss interventions and diagnoses.
Mental health difficulties (3e)	Crisp	Qualitative; Practitioner notes Due to sensitive nature of this attribute, it was not specifically queried, rather only based on practitioner observations	If (known) mental health difficulties, Then 3d_c = 1, Else = 0	Based on lit review and inputs from JS and other outreach practitioners and evaluation team advice.
Attendance to JS (4a)	Crisp	Quantitative, numerical; Monitoring data	If attendance >= 60%, Then 4a_c = 1, Else = 0	Based on lit review and inputs from JS and other outreach practitioners and evaluation team advice. For an even split.
	Pseudo-fuzzy		Normalized; unscaled 4a_f = attendance (in %age)	Based on lit review and inputs from JS and other outreach practitioners and evaluation team advice.
POLAR4 quintile (5a)	Crisp	Quantitative, categorical (ordinal); Interview question (postcode); OfS dataset (postcode-based metric)	If belonging to bottom two quintiles (Q1, Q2), Then 5a_c = 1, Else = 0	Based on lit review and inputs from JS and other outreach practitioners and evaluation team advice. Widely adopted proxy measure for access to HE (young learners only) The LLC uses bottom two quintiles as a WP flag in admissions processes
IMD quintile (5b)	Crisp	Quantitative, categorical (ordinal);	If belonging to bottom two quintiles (Q1, Q2),	Based on lit review and inputs from JS and other outreach practitioners and evaluation team advice.



		Interview question (postcode); Government datasets and national postcode database (postcode-based metric)	Then 5b_c = 1, Else = 0	Recently widely adopted proxy measure for access to HE (young and mature learners) The LLC uses bottom two quintiles as a WP flag in admissions processes
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6.2.1.1 *Calibrating Sub-Attributes into Conditions*

The following table notes how the attributes were used to develop conditions as input for our QCA. It is limited to the conditions which are used in the final analysis and reported model. The convention employed here is that CONDITION denotes presence; ~CONDITION denotes absence. U is the symbol for logical union.

Condition	Coding formula	Notes
EDUCATION	1a_c U 1b_c	(Presence of) EDUCATION: Time out of education (since last GCSEs) was less than 10 years, OR Observed positive previous experience of adult education, based on the project team’s interpretation of practitioner notes. OR Continued engagement with education, based on the project team’s interpretation of practitioner notes.
OUTREACH	2a_c U 2b_f	(Presence of) OUTREACH: Attended an IAG session in the current year (2022), OR (Pseudo-fuzzy calibrated) attended any other outreach activity, with more weighting given based on recency of attendance. <i>Note that the logical union of a binary and non-binary scale results in loss of information, but</i>



		<i>retains more information than if we had opted for the crisp-set variant of 2b_f.</i>
PERSONAL	3a_c U 3b_c	(Presence of) PERSONAL: Did not observe presence of caring responsibilities, OR Observed the presence of a support network.
TRAUMA	3d_c	(Presence of) TRAUMA: If observe presence of ongoing trauma and no known evidence of this trauma being mitigated, Note the use of the term ‘trauma’ throughout this report is shorthand for significant disruptive experiences having an ongoing impact at the time of Jumpstart and is NOT indicative of a diagnosis, although some participants did discuss interventions and diagnoses.
JumpStartATTENDANCE	4a_f	(Presence of) JumpStartATTENDANCE: Cumulative attendance is theorized to contribute to the presence of increased confidence, based on practitioner’s and project team’s experience. (Pseudo-fuzzy calibrated) percentage attendance on JS

7 Results

7.1 Confidence change

As discussed above, a one-tailed, paired samples T-test was performed on the data, with the alternate hypothesis that participants will experience improved confidence to study at university following Jumpstart. The paired difference scores were analysed using a Shapiro-Wilk test to be approximately normal.

There was a significant increase in participants’ self-reported confidence to study at university following Jumpstart before (M = 3.4, SD = 1.0) and after (M = 4.5, SD = 0.7) Jumpstart, $t(13) = 3.7$, $p = 0.001$; the Wilcoxon signed-rank test, which assumes non-parametric data, also reports a significant difference.

These outputs mirror our previous analysis; differential outcomes are present, including no-change. Data from the proceeding Jumpstart session (Spring 2023) will be integrated once available as part of the meta-evaluation of Jumpstart.

7.2 QCA output

A full analysis, including the conservative solution is provided separately (see Appendix 11.2.3). The partial truth table and most parsimonious solutions are presented here.



7.2.1 Necessity Analysis

The full standard solution is provided in the case-study; none of the conditions neither in their presence nor in their absence are claimed to be necessary for the outcome, as they do not pass the typical consistency threshold of 0.9¹. Conditions TRAUMA and PERSONAL have a relatively high consistency of 0.8, but the relevance of necessity (RoN) for each is less than 0.5.

JumpStartATTENDANCE has a relatively high consistency of 0.8 for necessity, and a RoN of 0.6. The parameters of fit, consistency and relevance of necessity, are explained in the section: 7.2.4.

7.2.2 Sufficiency Analysis

Figure 4 displays a partial truth table for our solution (i.e., contains only those combinations that exist in the data). The truth table displays combinations of Conditions that are sufficient for the occurrence of the outcome (in this case, an increase in confidence). A graphical vesion is presented in Figure 5.To be considered sufficient, a particular combination of conditions should cover the defined minimum number of cases (n, which is set to 1 for this analysis), and pass the consistency threshold for sufficiency (incl, which is set to 0.8 for this analysis²). The parameters of fit, 'incl' and 'PRI', are explained in the section: 7.2.4.

OUT: output value
n: number of cases in configuration
incl: sufficiency inclusion score
PRI: proportional reduction in inconsistency

	EDUCATION	OUTREACHFS	PERSONAL	TRAUMA	JumpStartATTENDANCE	OUT	n	incl	PRI
32	1	1	1	1	1	1	3	0.874	0.874
16	0	1	1	1	1	1	2	1.000	1.000
18	1	0	0	0	1	1	1	1.000	1.000
21	1	0	1	0	0	1	1	1.000	1.000
28	1	1	0	1	1	1	1	1.000	1.000
24	1	0	1	1	1	0	5	0.451	0.451
31	1	1	1	1	0	0	1	0.455	0.455

Figure 4. Partial truth table (contains only those combinations that exist in the data).

¹ It is advised that consistency threshold should be >= 0.9 necessity (Oana, Schneider, and Thomann, 2021).

² It is advised that consistency threshold should be >= 0.75 for sufficiency (Oana, Schneider, and Thomann, 2021).

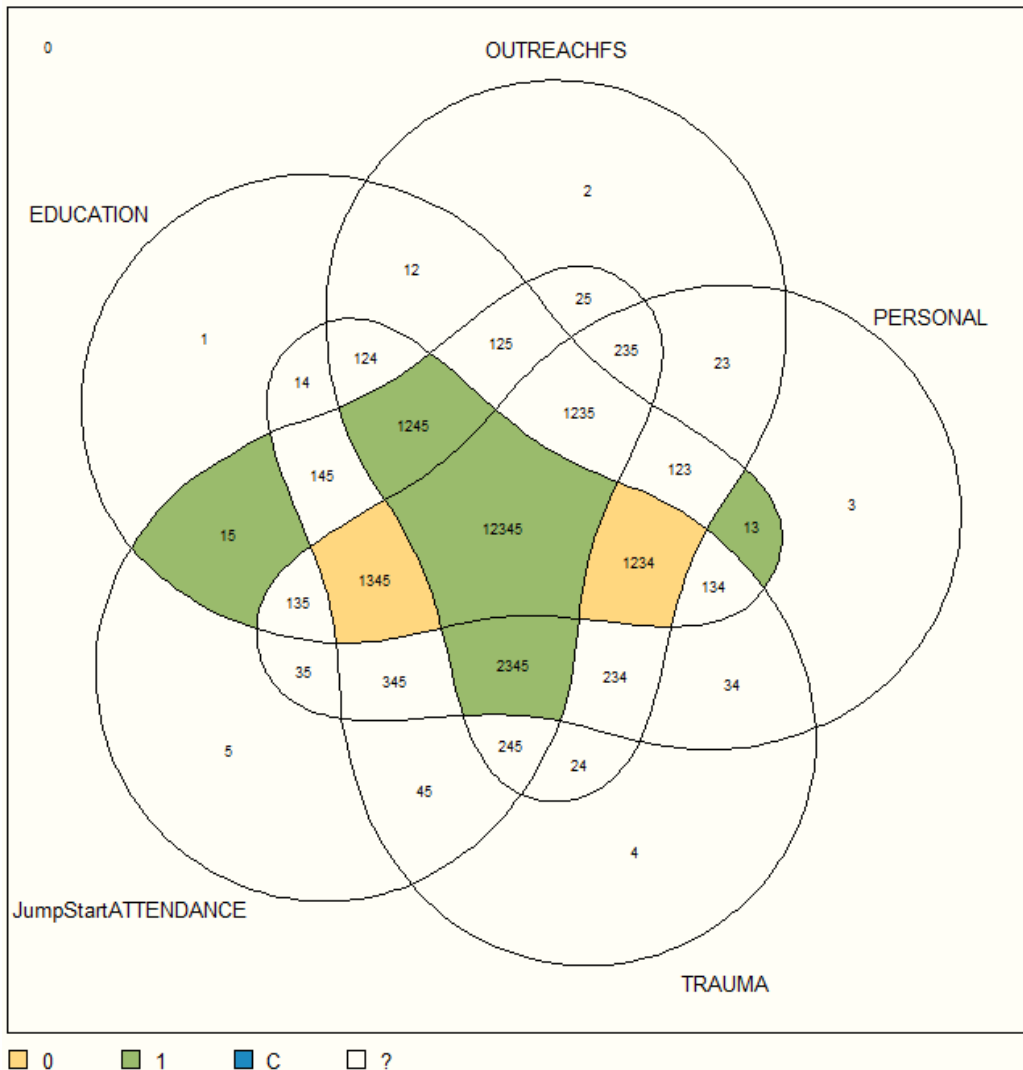


Figure 5. Venn diagram for the truth table; the column OUT is represented with colours (in key), where OUT = 1 represents sufficient conditions for the presence of ‘increase in confidence’.

In our case, five combinations (or truth table rows) were sufficient for the outcome, which were minimized using Boolean logic, and include logical remainders (Schneider and Wagemann, 2012), to form the most parsimonious solution presented in the following sub-section. This process used the R packages: QCA (Dusa, 2019) and SetMethods (Oana and Schneider, 2018).

7.2.3 Most Parsimonious Solution

The following is the most parsimonious solution based on the Conditions noted above. The conservative solution is provided separately (see Appendix 11.2.3).

From a grand total of over 20 participants, we have included 14 in this analysis. Most of the attrition is due to a lack of post-intervention confidence data due to either early departure or simply non-returned questionnaires, whilst some is due to lack of enough data in practitioner notes to meaningfully calibrate sub-attributes into sets.

Out of the 14 cases, we observed 10 (71%) reporting a positive change in confidence, 3 (21%) reporting no change, and 1 (7%) reporting a decrease in confidence. The parsimonious solution for positive change in confidence is expressed as (8 cases comprise the solution):



~TRAUMA + OUTREACH*JumpStartATTENDANCE -> CONFIDENCE_CHANGE

In other words, participants whose change in confidence at the end of JumpStart is positive:

- Were not observed to have been experiencing ongoing trauma, or in the event that they were, practitioner notes showed that this trauma was being mitigated [~TRAUMA],

OR

- Were known to have attended outreach activities in the current year, or attended at least one IAG event in the current year [OUTREACH], AND attended over half of the available Jumpstart sessions [JumpStartATTENDANCE]

Examining the cases that correspond to each minimized configuration provides key insight into which contributory factors drive an increase in self-reported confidence. However, due to the sensitive nature of the data collected, and our policy of light-touch data collection relying on practitioner observations, we will not be commenting on individual cases below. Instead, results and discussion are provided holistically for a typical Jumpstart cohort.

Configuration A: Lack of Ongoing Trauma

The first sufficient path consists of a single condition (absence of TRAUMA). In order to observe an increase in self-reported confidence of this cohort of Jumpstart participants, it was sufficient to have observed an absence of TRAUMA (the experience of ongoing trauma).

~TRAUMA -> CONFIDENCE_CHANGE

The absence of ongoing trauma can be said to lead to an increase in participants' confidence. The other contributory conditions included in our analysis were individually neither necessary nor sufficient for an increase in participant confidence. This solution reflects our approach to Jumpstart recruitment and supports our understanding of learners' capacities to engage with formal education provision at a given moment in their educational journey.

We recruit participants who we believe would most benefit from the course; this leads to the consideration of whether an applicant may be experiencing disruption to such a degree that it would overwhelm their capacity to engage. The practitioner works with the applicant through the interview for the course to help them both come to an appropriate decision about whether this is the right time to engage in the Jumpstart programme and whether this is the right programme for them.

Configuration B: High Attendance of Outreach Activities Including Jumpstart

The second and final sufficient path consists of the combination of attendance at Outreach activities or IAG events [OUTREACH], AND attended over half of available Jumpstart sessions [JumpStartATTENDANCE].

OUTREACH*JumpStartATTENDANCE -> CONFIDENCE_CHANGE



The second configuration explains the majority of cases where we observed an increase in self-reported confidence. This solution highlights the importance of continued engagement with the Jumpstart course and reflects our focus on the importance of community engagement, through outreach activities, and impartial advice and guidance (IAG) as core facets of supported decision making around accessing formal learning opportunities and/or Higher Education.

7.2.4 *Parameters of Fit*

So-called parameters of fit have been developed to absorb the effects of noisy, complex, real-life social science with formal logic (Schneider and Wagemann 2012).

We previously reported that no single condition was necessary for this outcome, because the consistency for necessity was under 0.9 and relevance of necessity was low. In necessity analysis, these essentially represent the degree to which the outcome is a subset of each condition, and whether a condition is trivial³. The maximum value for consistency is 1, and 0.9 is a typically used threshold.

Two key parameters of fit are employed when analyzing sufficiency in QCA: consistency (also labelled as inclusion, inclS) and coverage (covS, covU). Put simply, consistency measures to what extent conditions in the solution form a perfect sub-set relationship, while coverage is a measure of how many of the cases with the outcome of interest (positive change in self-reported confidence) are explained by the solution. The raw coverage (covS) encompasses the entire solution, whilst the unique solution (covU) covers each configuration. It is desirable to have each metric as close to 100% as possible⁴, and these parameters of fit give us an idea of the goodness-of-fit of our solution, at a glance, and allow us to compare against other models in the iterative process. A third, the proportional reduction in inconsistency (PRI), is essentially a measure of how contradictory the combination of conditions are, with respect to the cases they represent (i.e., does a configuration lead both to the presence and absence of an outcome, which would yield a PRI score of 0.5). It is desirable to have this value over 50%.

The parsimonious solution discussed has an overall consistency (inclusion) of 0.948, and overall coverage of 0.735. That is, the configuration displayed in the most parsimonious was found to be about 95% sufficient in leading to an increase in self-reported confidence and covered about 74% of the cases where this outcome was observed. The proportional reduction in inconsistency is 0.948. The output from R is shown in Figure 6.

Robustness tests indicate that our solution is overall reasonably robust; sensitivity to minimum number of cases included in the truth table is expected to improve with larger number of cases, as part of our continuing evaluation strategy. The reported solution is not sensitive to a higher consistency threshold of 1 (from the original 0.8), and contains no deviant cases, consistency in kind (Schneider and Rohlfing, 2013).

³ Consider the example of whether being a member of the European Union (EU) is necessary in order to adopt the Euro. Some non-EU states have adopted the Euro (e.g. the Vatican), but an overwhelming majority would be members of the EU and therefore such a claim would be considered trivial.

⁴ In contrast, a low consistency score (i.e. closer to 0) indicates that a large proportion of cases contract the statement of sufficiency, whilst a low coverage score (i.e. closer to 0) indicates that a large proportion of cases remain unexplained by the reported solution.



```
M1: ~TRAUMA + OUTREACHFS*JumpStartATTENDANCE -> OUTCOMECRISP
```

		inclS	PRI	covS	covU	cases
1	~TRAUMA	1.000	1.000	0.200	0.175	(2 cases)
2	OUTREACHFS*JumpStartATTENDANCE	0.933	0.933	0.560	0.535	(6 cases)
	M1	0.948	0.948	0.735		

Figure 6. The output in R of the most parsimonious solution, including key parameters of fit.

8 Findings and discussion

The findings from the QCA analysis suggest that participants on the programme record a rise in self-reported confidence when they are not impacted by ongoing experiences of trauma or when they have engaged in outreach activities or impartial advice and guidance and attended over half of the Jumpstart sessions.

It is not possible to draw firm conclusions about the specific impact of the ways in which discussions were conducted and experiences were navigated and how these either helped or hindered participants. However, there does seem to be support for four specific models, that are currently being implemented in our provision, in the reported rise in confidence across the majority of cases.

These models of practice are:

- a sensitive approach to exploring readiness to study and the opportunity to discuss experiences that might impact attendance and engagement
- development of partnership working with community and voluntary organisations to offer a variety of outreach activities
- a dialogic approach to impartial advice and guidance
- a focus on transformative pedagogy in the design of the programme.

8.1 Suggested models of good practice

8.1.1 Approaches to recruitment

A sensitive approach to discussing ongoing issues that may impact engagement with study opportunities is a key part of the interview process to help applicants' decision making.

When recruiting adult learners to non-accredited pre-entry courses designed to open up access routes to Higher Education, it is often the case that applicants have had challenging prior experiences of education settings and have negotiated trajectories which might include difficult, and disrupting, circumstances. The intersection of structural inequalities and individual experiences generate circumstances which can combine to create vulnerabilities resulting from significant disruptive prior and/or ongoing events.

The level of disruption experienced, and the ongoing impact of this, might limit the potential for the individual to engage with a course that requires regular attendance or intense peer interaction or



that might stimulate self-doubt or perceptions of ‘failure’, for example. The practitioner recruiting to a course will be mindful of this at interview and attempt to advise the applicant appropriately, about the nature of the engagement required and how this might be impacted by previous experiences and/or ongoing vulnerabilities; this is not to close down participation but, rather, to initiate a dialogue of possible courses of action, to instigate supported decision making and indicate potential alternative opportunities. Alternatives might include attendance at a future iteration of the course or activities that require shorter spans of commitment and/or suggestions of further support to help build resilience networks.

It would seem, from the parsimonious solution, that guidance for applicants to identify their personal readiness for study involves dialogue which facilitates understanding of whether there is an absence of ongoing disruption that might impact engagement. Providing appropriate support to applicants to judge their own readiness to study at this stage aims to help the majority of participants to experience the course positively and a rise in confidence, leading to their readiness to continue education in the future, or, alternatively, to feel supported to revisit education even if attendance is disrupted and they do not experience a lift in confidence at this time.

This approach is designed to challenge notions of fixed identities that ‘lack potential’ to help create narratives of aspiration formation. However, it would be naïve not to acknowledge that, while we locate this activity in aims to create transformative spaces for education participation, it also sits within a power dynamic which, simultaneously, risks ‘othering’ adult learners who are keen to engage but continue to be marginalised (Burke, 2012).

▪ *8.1.2 The outreach framework of activities*

We have designed the Jumpstart programme to sit within a range of activities that run with support from a range of local community partner organizations and which build over time. Using a community engagement approach which aims to support organisations and through attendance at community events and galas, visiting groups, providing information, running joint events, inviting groups onto the University campus and offering 1:1 impartial advice and guidance meetings, we aim to develop long-term relationships of trust with these community, voluntary and statutory bodies and the individuals who participate in, and run, their work.

The QCA solution perhaps therefore underscores the importance of the broader context of the Jumpstart course as one intervention among many, in helping to build participants’ self-perception of increased confidence in increasingly, but sensitively, formalised learning settings. For an outline of the broader context of the Jumpstart work see appendix 11.2.4 showing the Transforming Horizons Framework, which we use to structure our work.

▪ *8.1.3 A dialogic approach to Impartial Advice and Guidance*

A dialogic approach to impartial advice and guidance moves beyond the provision of information, which assumes a technically rational approach to decision-making. In a dialogic model the guidance practitioner helps the participant to reframe questions of economic gain and assumptions about the accessibility of institutions in order to open up pathways and develop narratives of opportunity. Providing IAG opportunities as part of outreach work to develop adult learners’ awareness of bridging opportunities, like Jumpstart, helps raise awareness of the programme itself, whilst also developing self confidence in the capacity to negotiate pathways to learning. The integration of the guidance practitioner and other support activity, including financial guidance, into the final session of the Jumpstart programme signals the provision of ongoing support for informed decision making which is central to our work.



▪ *8.1.4 Attendance on the Jumpstart course*

The significance of the cumulative impact of attendance on the course suggests that the transformative pedagogical approach contributes to the development of participants' learner identities. Regular attendance over time helps the practitioner to design scaffolded learning opportunities and allows participants to reflect, learn and act, as indicated in the practitioner's reflections. In the final session we asked the students to explain what confidence meant to them and their conceptualisations focus on individual and social, interactive experiences that help them to challenge the status quo. Some examples of the responses they chose to highlight include:

- Self-belief, abilities, skills and strengths
- Standing at the front
- Social bonds
- Feeling good
- Stepping out of comfort zone
- Visualizing a positive future outcome
- Spaces where thoughts have power and to express vital opinions to make the world new, against persecution.

These responses appear to reflect the 'cognitive, emotional (affective) and performance' components identified in Norman and Hyland's (2003) study of trainee teachers.

8.2 Using QCA in this context - Benefits, challenges and limitations

8.2.1 Benefits

QCA is employed typically as a case-focused approach which combines quantitative and qualitative analysis (Schneider and Wagemann 2012, and Thomann and Maggetti, 2020). An in-depth knowledge of cases is required, which the evaluation team was able to access via detailed practitioner notes, and meetings with the practitioners and other relevant stakeholders. Furthermore, this methodology is well placed to deal with an intermediate number of cases (10-50), which fit our cohort sizes; note however that modern computational capabilities have all but eliminated the upper limit on case numbers. Finally, an inherent output of this methodology is the identification of patterns across multiple cases to better show how different calibrated conditions interact and how the sum of parts can act differently to individual components. This fits well with our intention to employ QCA as an exploratory tool for both process and impact evaluation.

8.2.2 Lack of diversity

Although over 20 participants started the Jumpstart course we had two pre- and post-confidence and attribute measures for 14 participants. Furthermore, because of the targeted nature of the course, there was a lack of diversity in the experiences and circumstances of the participants and in the outcome experienced (change in confidence). Note that this embedded limiting of the 'solution space' was/is a known limitation, and one that cannot be alleviated due to the nature of the program. It should be noted that any good research must identify and, to a certain extent, fence-off the solution space in order to achieve meaningful results with reasonable resources. That this harms



the completeness or transferability of results is an accepted limitation (Schneider and Wagemann 2012). Still, limited diversity challenged our capacity to fully exploit the ‘comparative’ potential of the QCA approach and identify differences in configurations that impacted diverse outcomes. We are therefore necessarily cautious about claiming generalized findings from this limited data set and intend to expand our analysis to include future cohorts, thereby tackling this issue.

8.2.3 Identification of QCA ‘attributes’ and over individualisation

The QCA method requires the derivation of ‘attributes’ and there is a concern that this approach favours the identification of personal and situational factors impacting cases, which may tend towards ‘methodological individualism’ (Heath, 2020). Although QCA aims to explore context, the framing of the context in the method is largely limited to looking at participants’ individual experiences, rather than the contribution of structural inequalities and how the configuration of limited opportunities can impact education participation. The reporting of the method is therefore key to providing the theoretical basis of the attributes and setting these within a broader context.

8.2.4 Identification of QCA attributes – difficulties and challenges

We identified the attributes to use for the QCA analysis through a combination of literature review, practitioner expertise and discussion across the broader project team, who have experience of working with adult learners over a number of years. We initially identified more ‘attributes’ than were finally used in the analysis, as over time it became clear that we could not clearly identify the parameters of an attribute.

For example, we initially felt that the connection with Learning Champions, current students who had similar histories and had attended Jumpstart themselves, would impact confidence, as we have witnessed the transformative nature of these peer interactions in the past. However, it became clear that it was impossible for the practitioner to identify how all participants had engaged with the Learning Champions and the impact this interaction might have for any individual. Consequently, this attribute was dropped.

On the other hand, it was possible for the practitioner to record when students had completed formal education and time out of education is well documented in the research literature as impacting adult learners. However, we could not find reference to a specific length of time out of education as having an increased impact, although we were aware, and have lots of experience, of students feeling increasingly nervous when they have not been in a formal education setting for some time. When we discussed this further, we realised that deciding where to draw a line was somewhat arbitrary. The decision we made was to distinguish between those who had studied formally in the last 10 years and those who had been out of education for 10 years or more. This decision was supported by the practitioner’s sense of a qualitative difference between the anxieties expressed by these two groups.

It was particularly challenging to identify attributes that drew on participants’ personal circumstances, health and wellbeing. The impact of caring responsibilities and mental health issues are well documented in the literature and are often discussed by participants on the programme. Trauma informed approaches to pedagogy (Wartenweiler, 2017) support the importance of recognizing and acknowledging the impact of these types of experiences on learning and this is an approach taken on the Jumpstart course. Some participants appeared to be affected by the impact of negotiating ongoing experiences of ‘trauma’ and it felt important to include this as an attribute, but it is important to note that this was our shorthand terminology for an individual expending energy, dealing with significant emotional and psychological disruption, rather than a clinical diagnosis. Our definition of ‘significant’ was grounded in our interpretation of discussions with



individuals and cross case comparisons. This approach feels intuitively problematic and also runs the danger of over emphasizing the emotional and psychological aspects of learning and confidence, as discussed in 8.2.3.

8.2.5 *Reliance on practitioner notes*

We have referred a number of times to our determination that the QCA process should not impinge on the delivery of the programme. This meant that we restricted our data collection to observation and practitioner notes, which rely heavily on the relationship developed between the practitioner and each participant. It also impacted the attributes we felt able to use, since we needed to be able to articulate how each attribute manifested for each case.

Jumpstart is quite a small programme and the relationships developed between the practitioner and the participants are a core facet of the course, supported not only by the weekly meetings and Saturday sessions, but also through the offer of 1:1 support throughout the programme and beyond. This means that if an individual is not interacting in the group, the practitioner has a number of alternative interaction opportunities to explore experiences. Other members of the project team were also present in some sessions (in other roles) and were able to corroborate or contest interpretations of cases and attributes and these discussions helped us to refine our shared understanding of each attribute and the calibration decisions we made. However, the translation of practitioner notes and observations into the calibration of attributes did not feel entirely comfortable.

8.2.6 *Confidence measures*

The issue of confidence measures is a known limitation that we decided to integrate into this project and one that will need addressing in future work.

9 Reflections on QCA and the project

This pilot small-n evaluation developed out of our aim to build on our current evaluation practices for Jumpstart, by making use of QCA with expert guidance, to gain a better understanding of the configuration of factors that contribute to participants' rise in self-reported confidence, so we can continue to improve our provision.

We could not have considered implementing this evaluation without the support of TASO's project guidance. In addition, having existing understanding of QCA within the project team has been crucial to engaging the necessary expertise through an external consultant, mediating the flow of information and facilitating discussions between the consultant and the practitioners.

The objectives were to explore the QCA approach to:

- Better understand the contributing factors to students' changing perceptions of Higher Education as a realistic choice for them.
- Identify the (combinations of) conditions under which beneficial outcomes occur, as well as the conditions that appear to create barriers for students.

Conducting a Theory of Change and using the QCA methodology helped us to revisit our pedagogic approach to Jumpstart by making us re-consider our design assumptions and re-read the literature to re-define the network of factors at play in learners' lives.

There was a synergy between our desire to explore the configuration of multi-causal factors across cases and the small-n approach to exploring the 'causes of effects', which goes beyond focusing on variables (TASO, 2022). In particular, the opportunity to look at between case



comparisons drew us to QCA, but in the implementation of this methodology we have experienced limitations in our approach as outlined in 8.2.

○ 9.1 Recommendations

There are many circular experiences in the internal evaluation of projects which have been designed with specific aims. Here we outline specific issues we encountered and recommendations or next steps.

9.1.1

We were particularly attracted by the potential to use QCA as a small-n methodology with a small number of cases but, perhaps inevitably, the limited number of cases places constraints on what we can learn from this approach and the conclusions we can draw. Limited diversity also made our solution less robust to changes in frequency cut-off (n, or minimum number of cases per truth table row). In response to this, we plan to study the next iteration of Jumpstart using the QCA methodology. To address issues raised in the current project we plan to explore using different calibration strategies, increasing the pool of participants from which an adequate number of contrasting cases can be selected. This further opens up options to perform cluster analysis on the two cohorts. In the longer term we intend to explore the possibility of using different measurement tools following further interrogation of appropriate confidence measures.

○ 9.1.2

In order to avoid being overly intrusive we opted to use a light touch approach to data collection, relying on the existing approach to interviewing applicants for a place on the programme, practitioner observations and experiences of participant support throughout the duration of the course that we have developed over time. It will be interesting to explore the creative integration of evaluative reflective activities into the transformative pedagogy of Jumpstart, for students to explore their own confidence in future iterations of the course, building on the reflective exercise we included in the final session.

9.1.3

Using established metrics to interrogate perceptions of confidence and self-efficacy and/or follow up interviews to explore experiences would have offered opportunities to collect richer data but we judged that this level of interrogation could potentially have repelled applicants and participants, which would have been counter-productive. Although the parsimonious solutions do make sense, future work would benefit from reviewing how we conceptualize and measure confidence to generate more robust data. This additional step would help us to draw out a deeper understanding of the facets of confidence and the configuration of factors that might contribute to a rise in different types of confidence measures.

○ 9.1.4

In generating a Theory of Change to identify our assumptions, the activities we input, the change mechanisms we aim to generate and the outcomes we hope to achieve, we set up an outline of the intervention that we then set out to evaluate. The evaluation was designed to explore the configuration of factors that we have identified as important to participants and we have found that combinations of some of these factors do indeed appear to have an influence on self-reported confidence. This feels self-reinforcing and leads us to question whether increased distance between the practitioners and the evaluators might lead to more challenging outcomes. We would welcome the opportunity to collaborate with external partners to explore our own work, perhaps in a



mutually beneficial relationship of reciprocal evaluation, where a relationship could be built over time to help with development and design, but then be refreshed periodically with the introduction of new partner institutions.

○ 9.1.5

We work in a well-resourced, supportive Centre where evaluation is developmental, but we struggled to dedicate the time needed to implement this project, from bidding for the funding, through project design, recruiting and organizing the work of the consultant, conducting the evaluation alongside delivering the Jumpstart programme to discussing the findings, writing the report and identifying possible future work. The QCA method requires significant input from practitioners involved in the implementation of an intervention as well as those with expertise in conducting QCA.

Moreover, we have only looked at one small intervention that we deliver for a small group of participants, which actually runs alongside many other parallel and contiguous interventions which would all benefit from further investigation. This has been labour intensive and has drawn on the work of four core members of staff. This activity may be difficult for other smaller providers to fund and implement as core business in current workload models. For us to fully integrate QCA evaluation into our work we would need to expand our team.

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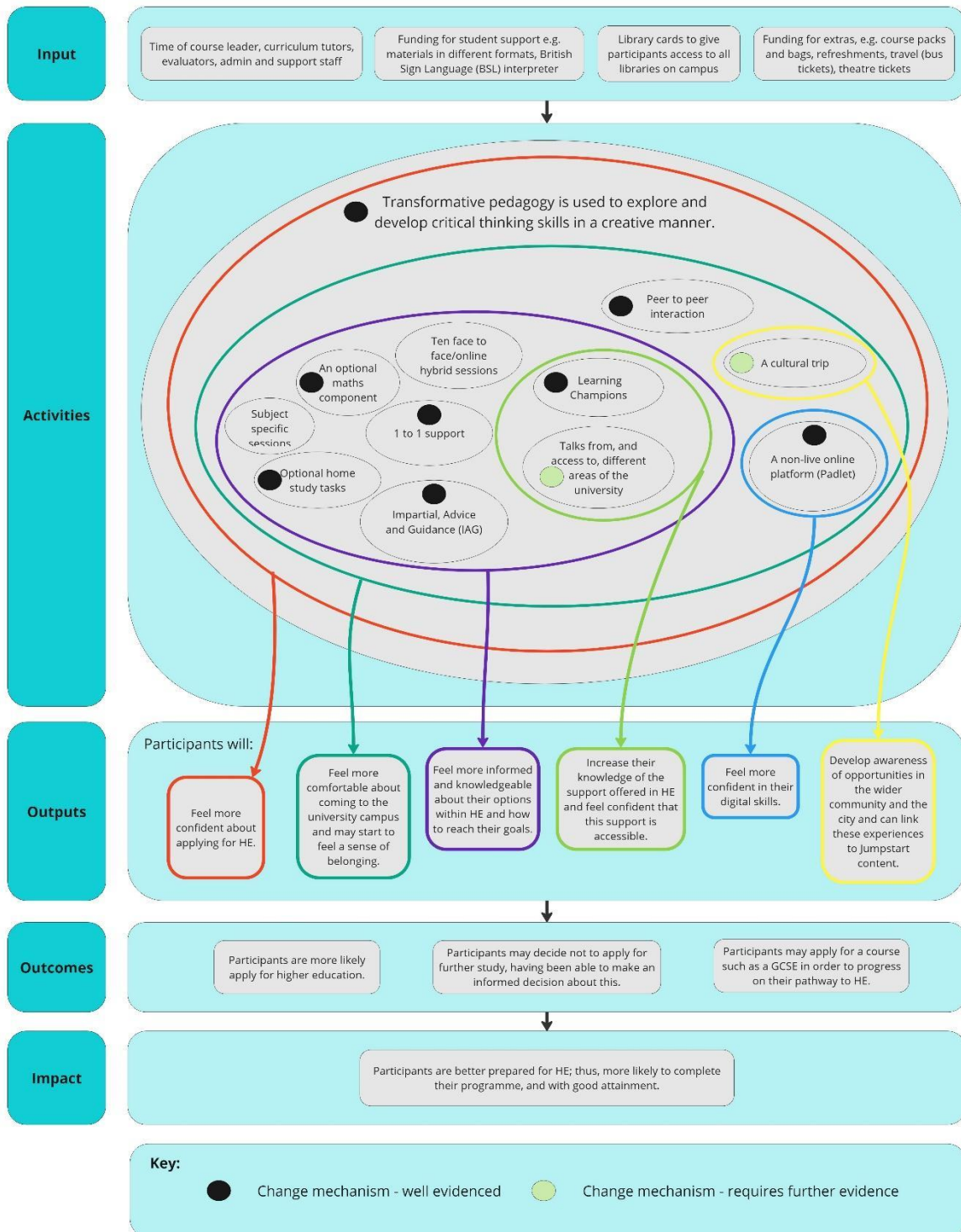
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11 Appendices

11.1 Visualisation of the Theory of Change



The enhanced Theory of Change document is provided separately.



- 11.2 Alternate QCA Output
- 11.2.1 Alternate Calibration

In section 3.3, we noted that “In in-depth qualitative studies using interviews with small samples of mature students, women have identified complex relationships with caring and domestic responsibilities, especially children and childcare, which are identified as **both drivers to study and barriers to accessing education**”.

In order to undertake a more complete QCA study, we therefore re-calibrated the sub-attribute 3a: caring responsibilities, so that the presence, rather than the absence, of caring responsibilities relates to (full) membership in the set. In other words, a logical NOT transformation. This reflects the scenario where we assume that the presence of caring responsibilities acts as a driver, rather than a barrier, to HE.

	Attribute	Calibration type	Data type and collection	Coding formula
(Main) QCA Output	Caring responsibilities (3a)	Crisp	Qualitative; Practitioner notes	If <i>don't</i> observe presence of caring responsibilities, Then 3a_c = 1, Else = 0
Alternate QCA Output	Caring responsibilities (3a)	Crisp	Qualitative; Practitioner notes	If <i>do</i> observe presence of caring responsibilities, Then 3a_c = 1, Else = 0

- 11.2.2 Alternate Parsimonious Solution

The following is the most parsimonious solution with alternate calibration of ‘Caring responsibilities’:

$$\sim\text{TRAUMA} + \text{OUTREACH} * \text{PERSONAL} \rightarrow \text{CONFIDENCE_CHANGE}$$

In other words, participants whose change in confidence at the end of JumpStart is positive:

- Were not observed to have been experiencing ongoing trauma, or in the event that they were, practitioner notes showed that this trauma had been mitigated [\sim TRAUMA], OR
- Were known to have attended outreach activities in the current year, or attended at least one IAG event in the current year [OUTREACH], AND had caring responsibilities (as a driver to access HE) OR the presence of a support network

The first path is identical to that presented in our main analysis. The second differs, and in fact includes the revised PERSONAL condition. That is not to say that attendance at Jumpstart is irrelevant in explaining an increase in confidence, merely that it was observed to be neither



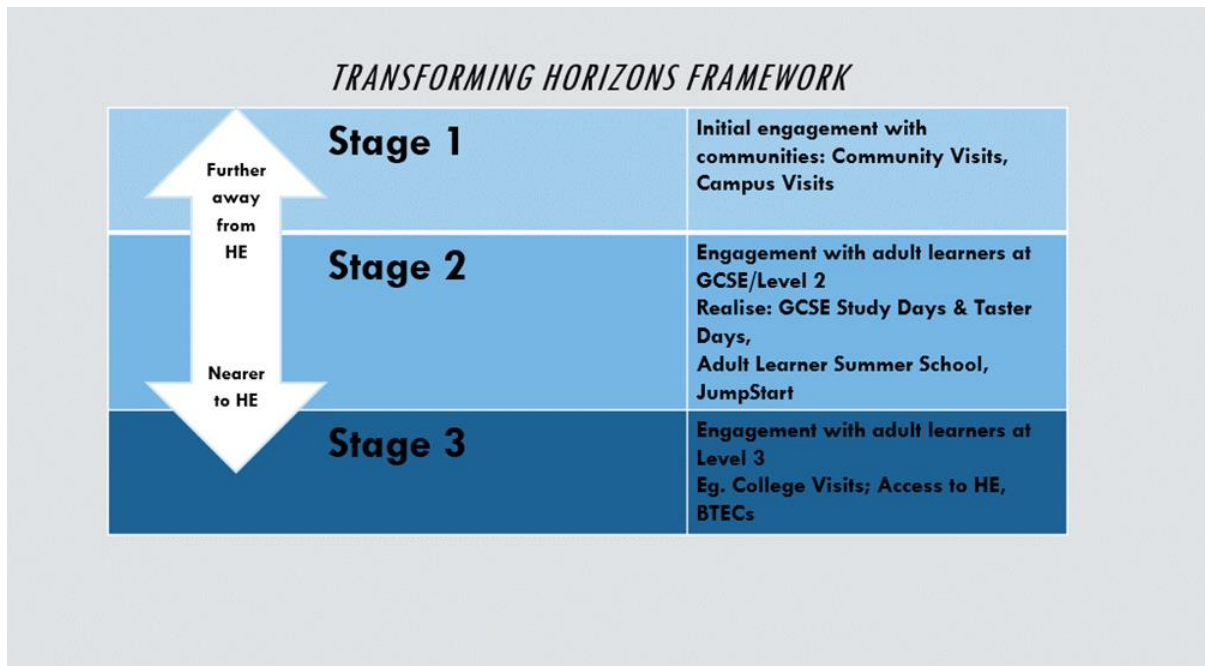
necessary nor sufficient for an increase in participant confidence. Compared with the parsimonious solution presented in the main body of the report, this configuration has a consistency (inclusion) of 1.0, i.e., fully sufficient in explaining an increase in confidence; however, it has a lower coverage of 0.61, i.e., only 61% of the cases with an increase in confidence are explained by the solution.

- *11.2.3 full QCA analysis notes*

Case study is provided separately.

- *11.2.4 Transforming Horizons Framework*

The Jumpstart programme sits within the Transforming Horizons Framework below:



10th May 2023