

Evaluating Personal, Interpersonal and Contextual factors of growth through Learning Together – the EPIC scale.

Learning Together offers world leading higher education opportunities in diverse classrooms explicitly designed to include students in our criminal justice system. Through partnerships between universities and prisons we offer students ongoing learning, progression and collaboration opportunities to build and empower a community of change makers.

Learning Together began in 2014 as an action research initiative. Through our research, we aimed to develop a valid questionnaire that could be reliably used to evaluate the experiences and growth of students – based both in prisons and at universities – as they participate in Learning Together. We wanted to collect the kind of data that might reliably measure what is happening for students who Learn Together. Our hope is that data gathered through this scale will, in the future, help to explain which aspects of growth through Learning Together help to support positive future outcomes for learners. Answering this question will help us to design our educational offering in the best ways possible to support this growth. In this blog we describe the background research underpinning the EPIC scale, the initial findings of our validation study, and the ways in which this scale can be useful for evaluation in Learning Together and beyond.

Background

Learning Together offers educational opportunities to a diverse cohort of students, including people with criminal justice convictions, within an inclusive learning environment. During their time participating in Learning Together, students typically meet together to study with each other (listen to lectures, under small group activities, complete assignments) in a shared classroom at their local prison. Using an experiential collective learning approach, and taking an attentive and inclusive approach to power dynamics within the classroom, preconceptions students might hold about each other and about ideas begin to shift and the students become a community of learners. Our research to date has shown these interpersonal aspects of learning are paramount to creating transformative learning cultures.

In order to understand the personal, interpersonal and contextual experiences of Learning Together, the research team sought to create and validate a questionnaire that would accurately assess growth across these dimensions. In particular, the aim was to capture changes in how students feel about themselves, how they interact with others on the course, and to what extent they experience their broader social context as supportive of their learning and personal development. There is currently no single assessment tool that can measure these important concepts concurrently in a learning context, even though research on processes of transformative learning within higher education and criminal justice settings suggests these factors alone, and together, are important indicators of positive change.

Research Phase 1

The research was conducted over two phases. In Phase 1, 132 students participated in qualitative interviews. Systematic analysis of these interviews allowed the researchers to identify common experiences and areas of growth that students believed were fostered through their participation in Learning Together. Students talked about changes related to personal development, interpersonal connections and how their social context shaped their learning and its impacts. Analysis of the qualitative data highlighted strengthened self- and interpersonal-efficacy, self-esteem and perspective-taking and a broadened sense among students of who they are and who they could become (future orientation).

Examples of these themes 'in action' in our qualitative data included this, from one student who highlighted the benefits they felt Learning Together gave them, both at a personal and interpersonal level:

"I think I became more confident, definitely, because - it was great to actually be sharing ideas with other people and talking about them and it actually working, people responding and registering what they are saying and surprising you and saying interesting things in response. That was definitely a confidence boost, because you feel like you are doing something that's making a difference for the people there."

Another student suggested that working together with their fellow course participants gave them a better understanding of others' perspectives, and a sense of commonalities with others they had previously thought were different to them:

"Yes, being a student, it was the first opportunity I had to study with other people. I've had no one to bounce off. But Learning Together I learnt to learn with other people and take their perspectives. Yes, not always think that I'm right, but I don't anyway. Just take other perspectives and debate things and just give me a sense of proper university studying I guess and, like I say, I could come back all the time, getting boring, so just to be included and realise that I can sit down with these kind of people who are just like me really. Yes."

For all students, Learning Together seemed to propel them into new ideas about themselves – who they are now – but also about their future – what and who they might become:

I: What would you say you learnt from Learning Together?

R: I learned...I learned that I'm a lot more capable than I thought I was. ... It's just really changed the way I see the future. I wouldn't rule myself out of anything really now. For a long time I was dogged by these confidence issues, I've ruled myself out of so much, 'That's not me. I can't do that,' but there's nothing literally that I would limit myself in doing, which is really different.

I: If you had to describe Learning Together to somebody else, what would you say?

R: I'd say it's a chance to meet some great people. To open your mind. To discuss things with like-minded people. To build your confidence, broaden your horizons. It's a chance to feel differently about yourself and your future.

In light of this data it was imperative for our new questionnaire to accurately and reliability capture growth across all five of these themes: self- and interpersonal-efficacy, self-esteem and perspective-taking and future orientation.

Research Phase 2

Using insights from Phase 1, the research team created a set of 37 questions that were adapted from well-known and pre-established questionnaires (e.g. the Rosenberg Self-Esteem Scale). Together, these 37 questions created a new scale to evaluate growth through Learning Together across its personal, interpersonal and contextual factors (dubbed the 'EPIC scale'). Collectively, the questions were designed and theorised to tap into these three factors through six components, as described in Figure 1 below. Three components, *self-esteem*, *self-efficacy* and *future-orientation*, investigated 'Personal' characteristics; two components, *perspective-taking* and *interpersonal-efficacy* investigated 'Interpersonal' characteristics; and the component *social cohesion* investigated 'Contextual' characteristics.

Figure 1

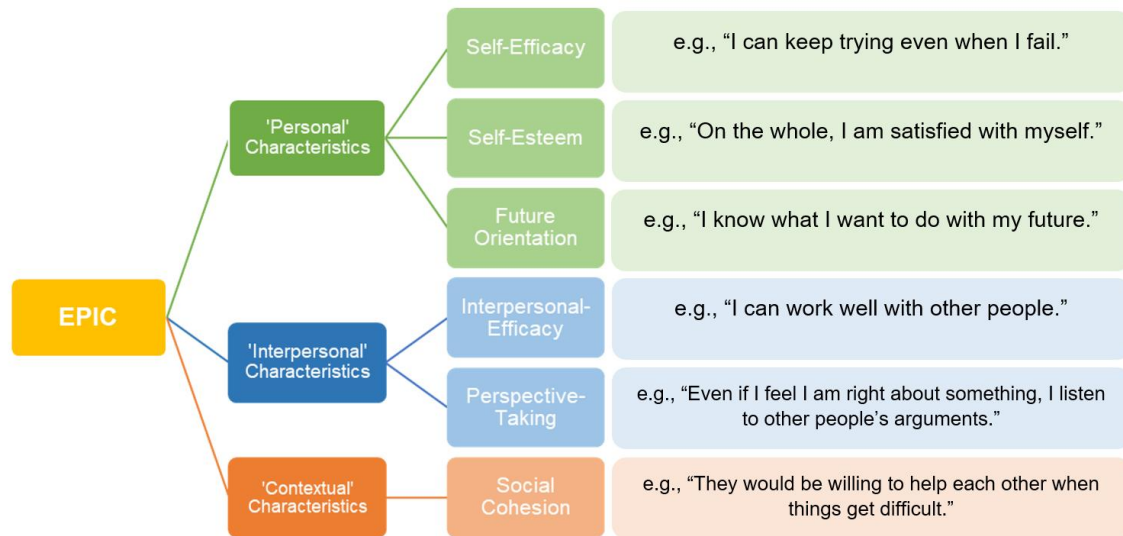


Figure 1. Construction of the EPIC scale with three factors and six components.

Having assembled these questions, university students were invited to complete an online questionnaire that included the newly developed EPIC scale, the original questionnaires from which it was adapted, and other scales measuring outcomes that the original scales are known to impact, including, for example, mental wellbeing and motivation. In total, 884 students completed the questionnaire. The research team ran a series of statistical tests on the data from their responses. These tests assessed the reliability and validity of the new EPIC scale.

Findings

Several important findings emerged from the analyses. First, the questions within the EPIC scale's six components were found to be highly consistent and share strong associations with the measures on which they were based. Establishing this consistency was critical because it allowed the research team to be confident that the adapted questions were both of good quality and had been correctly adapted from the original questions for use with Learning Together students.

Second, the six components of the EPIC scale were also found to have links with other relevant factors, such as student mental wellbeing, motivation, and feelings of identity within society. These additional factors were selected as previous research has shown they are related to the constructs being validated in this study. Most of the components and other factors were related to one another, to varying degrees. However, some components were found to be associated to specific factors in meaningful ways that are consistent with previous research and theory. For example, while all the EPIC scale's components were linked to improved mental wellbeing, consistent with previous findings, *self-esteem* had the strongest association with this factor. It was important to establish these associations with specific broader-context psycho-social factors as they demonstrate the uniqueness and importance of each of the EPIC scale scores.

Further, some of the EPIC scale's components varied in their associations with different types of students' motivation. Specifically, higher scores on *self-esteem* and *perspective-taking* were found to be associated only with higher scores in intrinsic motivation (the motivation to study or do work for its own sake due to self-determination, curiosity and interest). In contrast, higher scores on *interpersonal-efficacy* were uniquely linked only with higher scores in extrinsic

motivation (the motivation to work and study for reasons other than the work itself, e.g., desire for money, recognition, winning a competition, or any other incentives). Finally, higher scores on *self-efficacy* were found to be linked to higher scores in both intrinsic and extrinsic motivation. Thus, in addition to showing unanimous links with the other external factors (e.g., mental wellbeing), each of the EPIC scale's six components demonstrated unique patterns of associations with the motivation subtypes. This confirms that each of the six components can capture a range of important yet separate characteristics that are supported by previous studies and theory. In summary, these findings suggest that the EPIC scale can be used to assess the key aspects of growth that students identified in interview as being fostered through their participation in Learning Together and which are also consistent with theories of change/growth in educational and criminal justice contexts.

It was necessary for the research team to test if the newly developed questions accurately underpinned the EPIC scale's six core components. Using a technique called factor analysis, initial analysis showed clear distinctions between these facets, with all of the questions correctly nestling into their proposed component. Given this finding, it was confirmed that each one contributed uniquely and significantly to the EPIC scale's architecture.

A surprising finding emerged from this factor analysis, where the *self-efficacy* component questions split into two separate, but similar, sub-components. The first group of questions, dubbed 'Drive', were found to assess students' determination and willingness to learn. The second group of questions, dubbed 'Perseverance', were more associated with how able students were to overcome difficulties and set-backs in their learning. This finding suggests that the EPIC scale is better thought of as containing seven, not six, components related to assessing the three theorized personal, interpersonal and contextual factors, as shown in Figure 2 below. This is consistent with current criminological and educational theories suggesting that learning is a psycho-social process in which individuals construct their identities, grow and transform within and with the support of others in social contexts. Further correlational analyses identified mutual links between the Drive and Perseverance components with extrinsic motivation, whereas Perseverance was exclusively associated with intrinsic motivation. To the research team's knowledge, this is the first study to identify unique associations between subtypes of motivation and self-efficacy.

The final step in the analysis was to statistically test if the three theorised factors, 'Personal', 'Interpersonal', and 'Contextual', existed within the EPIC scale. This was done using a technique called statistical equation modelling. Results confirmed this was the case; with the findings suggesting that this way of contextualising the EPIC scale (i.e. as comprised of personal, interpersonal and contextual dimensions) was accurate and valid.

Taken together, these initial findings indicate the EPIC scale is validly conceived as having three principal overarching dimensions, which are composed of seven underlying and individual components.

Figure 2

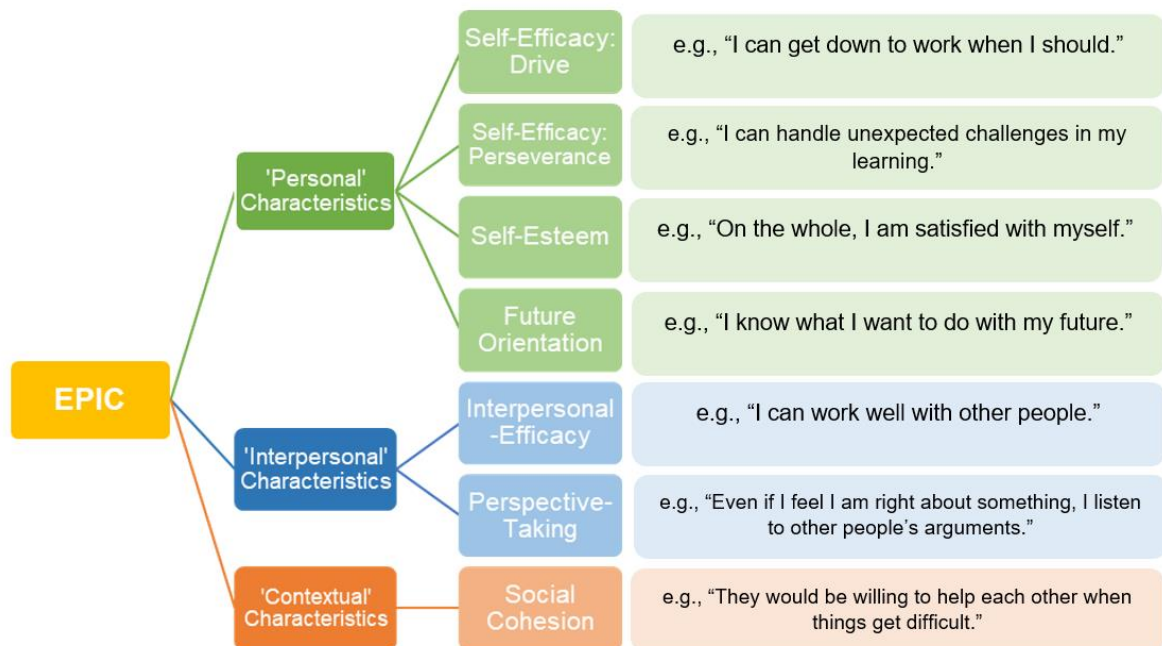


Figure 2. Amended seven component EPIC scale, with two self-efficacy sub-components: 'Drive' and 'Perseverance'.

Conclusions

These initial results suggest that the newly developed EPIC scale is a valid scale that can reliably evaluate the personal, interpersonal, and contextual aspects of Learning Together participation. More specifically, the EPIC scale allows us to continuously track each student's individual development during their experiences of an inclusive and collective-learning environment, and understand how they are experiencing their social context, including changes over time. Thus, we have been able to assess whether changes in one component are related to changes in another. For example, the EPIC scale can accurately detect incremental personal improvements (e.g. increased self-esteem), and its relationship with other improvements, such as the ability to interact with others (interpersonal efficacy and perspective taking).

The Learning Together research team will continue its work to extend this validation study through broadened statistical analysis of existing data and by including a larger cohort of responses from students in criminal justice settings. This will permit a comparison with these findings from a university-based student sample. We look forward to continuing to use the EPIC scale with current and future Learning Together student cohorts and would welcome approaches from organisations who believe this scale could help them to measure the outcomes of their work with different student bodies. If you are interested to learn more please contact Dr Ruth Armstrong on ra299@cam.ac.uk

Key Further Reading

R. Armstrong and A. Ludlow (2016) 'Educational partnerships between universities and prisons: how Learning Together can be individually, socially and institutionally transformative' *Prison Service Journal* 225: 9-17.

R. Armstrong and A. Ludlow (2020) 'What's so good about participation? Politics, ethics and love in Learning Together' *Methodological Innovations* 13(2): 1-10.

R. Armstrong, A. Ludlow, I. Obsuth and S. Larmour (2020) "The learning happens in the interaction": exploring the magic of the interpersonal in Learning Together' *Prison Service Journal* 250: 37-61.