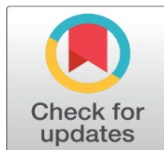


CAN THE USE OF FOUR SUPPOSITIONS AND TWO TECHNIQUES OF CHANGE ASSOCIATED WITH NEURO-LINGUISTIC PROGRAMMING (NLP) ENHANCE THE EXPERIENCE AND PERCEPTIONS ABOUT LEARNING FOR BOYS IN POST-16 EDUCATION?

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ABSTRACT

Living Educational Theory (LET), which sits within the interpretivist paradigm, provides pragmatic enquiries in real life educational contexts. This form of research provides a platform for examining four suppositions and two Techniques of Change associated with neuro-linguistic programming (NLP) particularly in the context of boys' engagement with learning. NLP is proposed as a powerful personal development method. However, the credibility of NLP is questioned due to limited research-based evidence. Four NLP suppositions and two NLP Techniques of Change are examined. Thereafter, a description of an exploratory study into how these suppositions and Techniques of Change may enhance engagement with learning is provided. The study utilised a single method (semi-structured interview) approach. It is a single-site, multi-voice study capturing the perceptions of NLP, for boys in post-16 education, situated in a rural community college. 'Positions of Consensus' and individual narratives are explored and suggest that four suppositions and two Techniques of Change may enhance boys' experiences and perceptions about learning. Possibly these NLP strategies may be helpful at an indirect level in enhancing boys' engagement with learning in post-16 education. Inferences provide tentative evidence that these suppositions and Techniques of Change may aid engagement with learning in this specific context. It is suggested that these NLP suppositions and Techniques of Change could be implemented, via a cost-effective training programme, to enhance engagement with learning and to drive a culture of excellence in schools and FE colleges.

Keywords: Neuro-Linguistic Programming (NLP), NLP Suppositions, Techniques of Change, Engagement with Learning, Post-16 Education, Learning and Teaching

1. INTRODUCTION

The concept of coaching is perceived as a strategy that can be successfully utilised in the British education system [Kudliskis \(2019\)](#). The National College for Secondary Leadership and Children's Services [NCSL] developed leadership programmes for potential Principals in which coaching is at the forefront of the training process [Lindon \(2011\)](#), [Lofthouse et al. \(2011\)](#). Educational coaching is provided by specialists in the field of educational and performance coaching. This enables coaches (students, teachers, and educational managers) to be more self-

reflective and perceptive about specific abilities and shortcomings in relation to learning. Successful coaching strategies could compliment contemporary educational philosophies such as growth mindset (see [Dweck \(2017\)](#)) or cognitive load theory (see Centre for Education Statistics and Evaluation, 2017) which have begun to dominate much of our understanding about 'learning to learn'.

A number of studies have emphasised the power of coaching as a strategy to enhance learning. [Dawson and Guare \(2012\)](#) suggest that the only requirement for successful educational coaching to occur is for coachees to have developed the required maturity to engage with such programmes.

Within coaching frameworks there are frequently a number of specific suppositions relating to engagement with the coaching process. One such coaching philosophy and framework is neuro-linguistic programming (NLP). Research into NLP in education tends to be qualitative with a focus on understanding specific techniques of change (see [Kudliskis and Burden \(2009\)](#); [Gray \(2000a\)](#); [Gray \(2000b\)](#)) that can be utilised by the coach to empower the individual to modify behaviours and change thought patterns thus creating greater autonomy and self-awareness.

The focus of this study lies in exploring four NLP suppositions and two Techniques of Change, in the context of classroom learning. Could NLP help in providing 6th form male students with a better understanding of processes to aid their learning? Engagement with these NLP suppositions and Techniques of Change may enhance performance for 6th form boys and, indirectly, benefit teachers and educational managers in learning contexts and establishments. These suppositions are linked to state (of mind), beliefs (about the ability to learn), the reticular activating system (RAS), and our comfort zone. The Techniques of Change are goal-setting and affirmations.

In sum, could these suppositions and Techniques of Change associated with NLP coaching philosophy be implemented in an educational context which would encourage 6th form boys to engage more effectively with their learning and thus enhance self-awareness and self-development in the context of learning?

2. RESEARCHING LEARNING IN THE CONTEXT OF A LEVEL STUDY

There is growing evidence of greater pressure to succeed in A Level education and examinations in England and Wales. It is important to ensure that students have access to appropriate support to nurture mental well-being and resilience [Nash et al. \(2021\)](#). The ability to demonstrate academic progress and academic success via results-driven English examinations such Advanced level (A-Level) is pervasive, possibly to the detriment of other, equally important, broader creative aspects of learning [Lorenzi and White \(2019\)](#). With this in mind, this current study utilises a co-participatory approach in that both the teacher-as-researcher and the boys become co-constructors of knowledge. Rather than the research being done to the boys, the research is done with them [Purdy and Spears \(2020\)](#). An understanding of four NLP suppositions and two NLP Techniques of Change may contribute to enhanced student academic success, creativity, mental well-being and resilience.

3. POSITIONALITY

Positionality is an integral part of the qualitative research process. Positionality indicates a recognition that the position of the researcher and the researched will

influence the research process. [Holmes \(2020\)](#). Knowledge and epistemology is situated. The position adopted by a researcher affects every phase of the research process and may bias the view and presentation of knowledge relating to the social world [Coghlan and Brydon-Miller \(2014\)](#). It is essential to contextualise the characteristics of the researcher, the researched and the research environment. Therefore, it is beneficial for researchers involved in qualitative research to explain positionality as it is recognised that ontological and epistemological beliefs can influence qualitative research [Holmes \(2020\)](#). Indicating positionality defines the boundaries in which the research was conducted. It provides a better understanding of how knowledge is produced [Jafar \(2018\)](#). An honest expression of positionality contributes to the validity of the research.

My interest in NLP as a pseudo-psychological perspective has developed over the years in the context of teacher, coach and teacher-researcher. I have researched NLP in various educational contexts; “not as a proponent, nor as an opponent but as a critical observer” (see [Kudliskis \(2019\)](#)). This study reflects a desire to critically examine four suppositions and two Techniques of Change associated with the implementation of NLP as a coaching philosophy in this specific educational context. My positionality, as researcher, is significant; however, this does not affect my impartiality nor introduce confirmation bias within this specific piece of research.

4. COACHING – AN OVERVIEW

Coaching is conceived as the ability to increase and improve the sensitivity and awareness that an individual has within herself or himself, and for others [Du Toit and Reissner \(2012\)](#). Coaching offers assistance by enhancing an individual’s ability to transfer their learning to succeed in complex, independent performances [Kamarudin et al. \(2020\)](#). Coaching is a form of development in which an experienced person, called a coach, supports an individual, the coachee, in achieving a specific personal or professional goal by providing training and guidance [Pradeep \(2011\)](#). In a coaching relationship a bond, grounded in trust, is created that progresses longitudinally. The coaching relationship is built on respect and involves navigating, negative and positive, reactions on both the part of the coach and the coachee [Deiorio et al. \(2016\)](#).

Coaches use a range of communication skills; these include active listening, questioning, clarifying, and reflecting. Such coaching techniques help individuals to change or reframe their perspectives and thus uncover myriad approaches to achieve their goals. Coaching can support individuals in all forms of endeavour; however, some coaching techniques may need to be modified to account for cultural variation. Coaching can be utilised in a range of contexts including education [Cox et al. \(2018\)](#); [Cox \(2013\)](#).

In an educational context coaching is applied to support students, teachers, and educational leaders. “Coaching is a person-centred approach [it] is a powerful way of supporting all those persons involved in education. It supports the notion that learning should be personal and changing.” [Van Nieuwerburger \(2012:6\)](#). For students, the opportunities provided by coaching can also include collaborating with fellow students to improve grades and skills, both academic and social [Abdulla. \(2017\)](#).

An educational coach facilitates learning and enables students, teachers and educational leaders to achieve their potential. In particular, educational coaches work with learners by helping them to reflect on current performance and the negotiation of objectives for the future. The coach assists the learner to identify

needs and create a plan to achieve these [Deiorio et al. \(2016\)](#). Educational coaches help learners to be accountable for their learning and to improve self-monitoring. Successful coaches and coaching will model the benefit of coaching as a lifetime requisite [Deiorio et al. \(2016\)](#). Effective application of a coaching model or coaching models enables the outcomes the coachee wishes to achieve [Wall \(2016\)](#); [Wall and Perrin \(2015\)](#). It is essential that coaching conversations meet the needs of the coachee, not the coach; therefore, it is important that the coach is not confined solely to a rigid model [Robins \(2017\)](#). The growing popularity of coaching has led many schools, colleges, and universities to offer coach training programmes; some of which are accredited by professional associations [Milne-Tyte \(2016\)](#). However, it should be noted that a challenge that faces the coaching 'industry' is that of upholding levels of professionalism, standards, and ethics. Whilst coaching bodies and organisations provide a code of ethics and requirements for standards these bodies are not fully regulated (at the moment). As coaches are not required to belong to a professional body this can lead to variable professional standards and ethics [Grant and Cavanagh \(2011\)](#).

A range of definitions exist in relation to coaching; however, in the context of the current study coaching is defined as "A collaborative, solution focused, result-orientated and systematic process in which the coach facilitates the enhancement of work performance, life experience, self-directed learning and person growth of the coachee" [Grant \(2001\)](#).

5. NEURO-LINGUISTIC PROGRAMMING (NLP) – AN OVERVIEW

Neuro linguistic Programming (NLP) is a philosophy and coaching model introduced by [Bandler and Grinder \(1975\)](#); [Grinder and Bandler \(1976\)](#). They likened an individual to a cybernetic unit; a complete mind-body system. An individual comprises an internal experience associated with the mind ('neuro'); the language the individual uses ('linguistic') and the behaviour ('programming') that results from their interaction with the outside world [Bandler and Grinder \(1975\)](#); [Grinder and Bandler \(1976\)](#). However, there are times when the cybernetic system (the individual) can misinterpret internal information (neuro); select inaccurate language to explain the situation (linguistic) and then demonstrate inappropriate interactions with the outside world (programming). To this end, NLP coaches use learner-specific or the behaviour-specific techniques to help an individual to modify behavioural patterns. The utilisation of NLP strategies can aid individuals to move from negative to positive behavioural patterns and ultimately to move from 'failure' to success [Ilyas \(2017\)](#).

[Devilly \(2005\)](#) and [Ilyas \(2017\)](#) have identified links between established and evidence-based psychological techniques and NLP. For example, person-centred counselling (the humanistic approach) links with developing rapport; the notion of vicarious learning (the neo-behaviourist approach) links with modelling; cognitive behavioural therapy (CBT) techniques links with reframing; and classical conditioning (behaviourism) links with anchoring. However, the factor that separates NLP from the above is its emphasis on personal change and development of, in this context, learners. The assumption is that all learners can transform their behaviour to a way they understand and represent their world and not according to the way the world, supposedly, exists.

However, NLP's position outside mainstream academia is precarious. Whilst the evidence base for psychological interventions in both physical and mental health has strengthened, evidence in relation to NLP is lacking and continues to attract

academic criticism. Indeed, NLP has been referred to as psychobabble [Rosen \(1997\)](#) and pseudoscience [Beyerstein \(2001\)](#). More recent criticisms are noted by [Zeb et al. \(2021\)](#) who suggest that NLP comprises unclear notions and disjointed theories.

NLP encompasses a substantial range of concepts in the field of coaching; these include The Disney Model©, The Mercedes Model© eye-accessing movements and preferred representational systems. However, the focus of this study relates to four specific suppositions and two specific Techniques of Change. The following briefly elaborates on these concepts.

6. SUPPOSITION - STATE (OF MIND)

Whenever we do anything, particularly if we want to do it well, we need to be in the right frame of mind, or in the right “state” of mind. It is important to be in the right state to achieve the best results [Boyes \(2008\)](#). Effective individuals are good at choosing states, mastering those states, moving between them, and exploiting their potential [Pliskin \(2001\)](#). Proponents of NLP affirm that it is possible to manage these states once individuals are aware of them. Individuals can move from one state to another: not through resolution via conflict, but through simply changing from one state to another [Andreas and Andreas \(2000\)](#). The thoughts and the feelings in the desired state will be different from those in the present state; therefore, an individual must be motivated to change to the desired state. The individual must be committed to the outcome and believe the goal is achievable and worthwhile [O'Connor and Seymour \(2011\)](#); [Boyes \(2008\)](#).

In relation to learning it can be seen that the notion of moving from a present state to a desired state is beneficial. If a student believes that they ‘cannot learn’ in whatever subject or in whatever context; over time it will become harder for both the student and the teacher to challenge the present state and enable movement to the desired state. NLP may help modify a student’s state of mind, so that they can move from those states that inhibit learning, to those that accelerate readiness to learn in meaningful ways. NLP helps individuals to be more motivated, to build confidence and self-esteem [Drigas et al. \(2021\)](#).

7. SUPPOSITION - BELIEFS

Belief is usually defined as a conviction to the truth of a proposition. Beliefs motivate and shape our behaviour. “Our beliefs are a very powerful force on our behaviour” [Dilts \(2018\)](#). They are frequently utilised as guiding principles, or inner maps that help make sense of the world [Dilts \(2018\)](#). We create beliefs by generalising from experience and drawing upon cultural and environmental experiences. Most importantly, if we believe in something we act as if it were true [O'Connor and Seymour \(2011\)](#).

It is important to note that beliefs act like filters and cause individuals to act in certain ways. Beliefs are difficult to disprove and therefore can act as strong perceptual filters [O'Connor and Seymour \(2011\)](#). Beliefs can be positive and enhance our capabilities; equally, beliefs can have a limiting effect and reduce capabilities and effectiveness. The limiting effects of beliefs programme the brain to fail and thus prevent an individual from expressing their true capability [O'Connor and Seymour \(2011\)](#). Language is an essential part of the process we use to understand the world and express beliefs. Therefore, it is important to understand the linkages between language and belief. Dilts notes that beliefs operate on a different level than behaviour and therefore do not change in accordance with the rules associated with behaviour. Beliefs are ‘unusual’ in that environmental and

behavioural evidence contrary to a belief will not necessarily change the belief. "A belief can become so strong that it takes the place of knowledge about reality" [Dilts \(2018\)](#). Individuals will disguise their beliefs as a way of protecting themselves or 'justifying' particular behaviours.

Beliefs are not a product of knowledge about reality but rather attributes that motivate and shape behaviour. If we believe something we are likely to act as if it were true. This clearly has implications for learning. If individuals believe that they cannot learn, such beliefs may have a profound effect on their behaviour.

8. SUPPOSITION – RETICULAR ACTIVATING SYSTEM (RAS)

The more precisely an individual can define a particular outcome the better able that individual is to programme the brain to seek out and notice possibilities [O'Connor and Seymour \(2011\)](#). The notion of the brain recognising or noticing possibilities is linked to the Reticular Activating System (RAS). The RAS is a set of neural pathways used to pass messages to the brain [Gray \(2000a\)](#). The more we do something, the more the same neural pathway is 'trodden' within the RAS. So, for example, driving a car along a particular route on a regular basis becomes 'easier' over time as the route becomes programmed in our mind. Some days the activity of driving this route will have been completed whilst the driver has been 'day-dreaming' (not in the purist sense, but attention has been diverted elsewhere); nonetheless, the driver is left wondering how they travelled from A to B without realising. So, if limiting beliefs are met every day and reinforced with behaviours, they will, in time, become 'true' to the individual's reality. In some cases, these limiting beliefs will be perceived as so true that they will be perceived as impossible to change and therefore cannot be changed. However, proponents of NLP state that through the meta-model of language; that is using heuristic questions to challenge and expand the limits an individual's model of the world, (see [Bandler and Grinder \(1975\)](#); [Grinder and Bandler \(1976\)](#)) it is possible to re-programme the RAS by replacing limiting beliefs and behaviour with positive beliefs and behaviour.

9. SUPPOSITION – THE COMFORT ZONE

The concept of a comfort zone is that of a psychological area or 'zone' in which an individual "can perform effectively and with confidence." A comfort zone is defined by "the activities and situations in which a person feels comfortable" [Gray, \(2000a\)](#).

When an individual moves into a new situation and is required to conduct behaviour that is unfamiliar this can lead to psychological discomfort such as anxiety and unease. In extreme cases this discomfort may be expressed as panic attacks, poor coordination, palpitations, memory loss or nausea. Symptoms of such discomfort tend to be a product specific to each individual.

The notion of comfort zones is associated more with feelings, emotions, and perceptions. It is important to acknowledge that the way an individual responds to a situation will be, to some degree, determined by how comfortable they feel in that given situation [Gray, \(2000a\)](#).

10. TECHNIQUE OF CHANGE – GOAL-SETTING

One of the features associated with NLP is the ability to modify beliefs, thus influencing behaviour and achieving a desired state is to create goals. These provide

a structured way for the individual to think about what they wish to achieve and how to achieve it [Boyes \(2008\)](#); [Freeth \(2017\)](#). Moreover, the process of setting goals enables individuals to distinguish between “what [they] are asking for” and “what [they] really want” [Bragg \(1999\)](#).

A number of steps need to be followed in goal-setting. Jennings & Philips suggest eight stages and these are as follows: i) To decide what is desired and to state this positively; ii) Ensure that evidence of the procedure is provided; iii) Ensure that the individual knows how to start the process and that progress can be maintained towards the outcome; iv) The desired outcome must be placed in a context and this is identifiable by asking questions such as ‘When do I want this’ and ‘Where do I want this’; v) Retain positive by-products from the process; vi) Develop ecology checks (is the cost, financial or otherwise, worth the time and effort); vii) Consider goals in a broader context and consider the advantages and disadvantages associated with these; and finally viii) Internal checks (how does the individual really feel about the outcomes, are they truly desired) [Jennings and Philips \(2000\)](#).

11. TECHNIQUE OF CHANGE – AFFIRMATIONS (SELF-TALK)

According to [Kross et al. \(2014\)](#) self-talk is the internal monologue that people engage in from time to time during introspection. Self-talk permits an ability to self-regulate and is directly associated with the use of affirmation. Affirmations can help an individual achieve their outcomes or goals. An affirmation is “a pithy statement of your outcome that assumes that it is possible and achievable and keeps your mind focused on it” [O'Connor \(2001\)](#). Affirmations are like belief statements; they should always be positive and carefully phrased. Self-development affirmations should be made as if they are occurring now; however, they should not be given a specific deadline. Affirmations should only have specific deadlines if they are about a specific action [O'Connor \(2001\)](#). Self-affirmation is used as a strategy to augment and appraise the self as worthy, efficacious, and capable of controlling important outcomes. Positive affirmations increase an effectual view of the self and improve inhibitory control abilities [Albalooshi et al. \(2020\)](#).

In the context of affirmations, it is important that the individual appreciates that the affirmation they select to challenge their beliefs and perceptions of a given situation may, in turn, cause some psychological discomfort in the short term.

12. RESEARCH PHILOSOPHY

This study was conducted within the broader qualitative research tradition, specifically educational action research. As an empirical process action research focuses on the creation of transformative change through the simultaneous process of taking action and doing research, which are linked together by critical reflection. Action research provides the opportunity to generate an ongoing cycle of co-generative knowledge [Coghlan and Brydon-Miller \(2014\)](#). Typically, teachers involve themselves in systematic research enquiries that are designed to improve professional practice [Koshy et al. \(2011\)](#). Educational action research can provide a specific form of insight that may not be available via the positivist tradition. Such research is conducted “in situ”; it provides teachers with opportunities to examine issues that are important to them in their specific work context [Whitehead \(1985\)](#). Barry sought to refine these concepts by proposing the concept of Living Educational Theory (LET), stating, “[it is] a critical and transformational approach to action research. It confronts the researcher to challenge the status quo of educational practice” [Barry \(2012\)](#), as cited in [Atkins and Wallace \(2012\)](#), p. 131.

This specific LET research endeavours to make an original contribution to knowledge through generating living educational theory relating to some suppositions and Techniques of Change associated with NLP which may contribute to the learning of boys in post-16 education within this specific learning context.

In the context of action research Golby suggested that case studies enable researchers to observe [a phenomenon] closely and “to render it in some way intelligible” [Golby \(1994\)](#). This case study provides information about the particular and if compared to similar studies permits meta-analysis, a way to combine and summarise the results of different studies [Andrade \(2020\)](#).

Action research does have its critics; for example, [Toro and Werneck \(2007\)](#) argue that there can be resistance to an action research project. Participants in action research projects may not identify with the research project. Perceptions as to the relevance of the project may compromise engagement [Cargo and Mercer \(2008\)](#). There may be a mistrust of researchers that leads to pressure and frustration, for those involved in the action research process [Zhou \(2012\)](#). [Berg and Eikeland \(2008\)](#) assert that the action researcher’s observations can be “filtered” and “framed” by both the context and the researcher [Berg and Eikeland \(2008\)](#).

The purpose of this study was to create an initial exploration of the responses by the boys to four suppositions and two Techniques of Change associated with the coaching philosophy of NLP as exposed via an NLP coaching debriefing session. The qualitative responses, via a semi-structured interview, are highlighted from the focus group semi-structured interviews. Do four suppositions and two Techniques of Change highlighted by [Gray \(2000a\)](#); [Gray \(2000b\)](#) help these boys better understand their approaches to learning and themselves in this post-16 educational context?

13. METHODOLOGY

This specific focus group case study explores additional elements related to an original study [Kudliskis \(2019\)](#). This study was a single-site, multi-voiced study created to capture experiences and perceptions of the boys taking part. The focus group comprised male students completing the final year of their post-16 education; all were taking A levels (a qualification typically associated with university entry in the English and Welsh education system). The group consisted of 9 students aged between 17 and 19 years (mean 17.44; standard deviation 0.53) who, with parental consent, had participated in an NLP coaching intervention over a period of 12 weeks (one term). They had then agreed to discuss their broader perceptions in relation to four suppositions and two Techniques of Change associated with NLP they had experienced.

This study utilised a single method approach in the research process using a qualitative research tool. Commentators such as [Saunders et al. \(2023\)](#) argue that it is better to use a pragmatic mixed-methods approach. However, given the nature of this study the researcher felt a single method research tool, the semi-structured interview, was the most appropriate and efficient way of securing the perceptions of the boys (see Appendix 1).

Approximately 1 week after a 12-week intervention ceased the boys took part in a semi-structured interview to gauge their perceptions about some of the suppositions and Techniques of Change of NLP on their personal understanding of their learning experiences. The semi-structured interviews lasted between 18 minutes and 37 minutes (dependent upon the depth of responses from the various

participants). All semi-structured interviews were recorded and transcribed. Responses were explored through a form of thematic analysis (see [Guest et al. \(2012\)](#)) and presented by individual comments and, in what I term, 'positions of consensus'. Positions of consensus (see [Kudliskis \(2019\)](#)) reflect synthesised viewpoints, presented on the part of boys, be they negative or positive, in relation to the value of suppositions and Techniques of Change associated with NLP. The outcomes of this form of analysis enabled the teacher-researcher to express, by foregrounding the voices of the boys, how suppositions and Techniques of Change associated with NLP may, or may not, help a specific age range of male students engage with learning.

The use of a case study could introduce bias as the students participating in this study knew the teacher-researcher as the subject leader of Psychology and Sociology. This could lead to participants displaying subject effects and the teacher-researcher exhibiting demand characteristics which could have tainted the research. However, the boys were asked to be, and were expected to be, honest in the way they reported their experiences in relation to this research.

Research involving human participants raises complex ethical, legal, social and political issues. There are three objectives in (education) research ethics. The first, to protect participants; the second, to ensure the research is conducted in a way that serves the interests of all stakeholders; the third, to manage risk, protect confidentiality and ensure informed consent [Hammersley and Traianou \(2012\)](#). It is against these criteria that this study received ethical approval from the Research Ethics Committee of the College.

I endeavoured to ensure impartiality and reduce confirmation bias. I adopted a regime of systematic data analysis. This involved utilising a work colleague, with a research background, as a 'critical friend' to review my analysis of the data. I sought to provide the necessary safeguards, checks and balances essential in rigorous research (see [Cohen et al. \(2018\)](#)).

14. RESULTS

The results were collected and collated in a qualitative format foregrounding the voices of the boys in relation to their views, experiences, and perceptions of specific elements of NLP in the context of learning. The results were placed into two broad categories: firstly, suppositions; and secondly, Techniques of Change. Thereafter, an analysis of the boy's responses to the NLP suppositions and Techniques of Change in relation to learning, in a post-16 context, were scrutinised in detail; emerging themes were considered. The category Suppositions included the boys' reflections about state of mind; beliefs about learning; the Reticular Activating System (RAS); and the comfort zone. The category Techniques of Change included the boys' reflections about goal setting and positive affirmations.

The qualitative analysis of the general views of the focus group are exemplified through the use of a specific participant response that more generally captured the broader views of the group, a position of consensus within the focus group. At other times, very specific, individualised narratives are presented to add breadth and depth to the results.

Question 1: Appreciating the supposition of 'State of Mind' and associated perceptions of the boys.

The first supposition to be explored was state of mind. All of the boys indicated that their state of mind has an effect on their learning, albeit to varying degrees. This

may be particularly evident in exam preparation and performance. One observation that exemplifies this position of consensus is:

Your frame of mind influences your learning a huge amount. I think you learn a lot better if you have a positive state of mind towards [learning].....I think if you have a positive state of mind it's easier to make things happen. (Boy 9)

A specific narrative from one boy indicated:

By immersing myself in these positive thoughts and focusing on working so hard I come out with a better [positive] state of mind. (Boy 2)

Another boy explained that state of mind can be influenced by 'stress'. This study did not provide the boys with a specific definition of stress; but rather, let them express their experience of their perceived stress.

My state of mind influences my learning. If I feel a little bit stressed, I'm less likely to learn..... I realise that this state of mind is wrong when [learning]. (Boy 2)

The notion of stress and its effect on state of mind is explained by one of the other boys:

I have begun to understand why it [stress] happens and how I benefit from a positive state of mind [when learning]. (Boy 1)

Another boy indicated that state of mind can be influenced by individual mood patterns:

I think your state of mind and mood do affect how you learn. If you're in a bad mood, you're focusing on the things that are creating that mood. (Boy 3)

One boy, indirectly, developed this idea further when he stated:

[Stress] can take over in a few seconds and then I can't concentrate. Suddenly everything seems to be spiralling and I can't think about what I've learnt. (Boy 5).

Another boy spoke of the ability to enter a negative state of mind and the need to strive to achieve a positive state of mind to ensure a positive learning experience:

It can be easy to slip into a negative state of mind. You need a positive state of mind as there is a lot of positive and negative feedback that affects your learning. (Boy 4).

Another explained that he felt that teachers needed to be more aware of the importance of a learner's state of mind and the impact of this on learning:

[A state of mind is] a psychological response; teachers should understand this and adapt their teaching [practice and strategies]. (Boy 3)

Question 2: Appreciating the supposition of 'beliefs' and associated perceptions of the boys on their ability to learn.

The second supposition to be explored was beliefs in the context of learning. All of the boys indicated that their beliefs, albeit to varying extents, influenced their

ability to learn. Personal belief systems were very important in achieving positive learning outcomes. A position of consensus is exemplified in the following comment:

I have a belief system in which I believe I am capable of most things. I have put more effort into some things. There aren't any restrictions on what I can do and I guess the [NLP] intervention reinforced this belief. (Boy 5)

Another boy explained.

An improvement in my belief system, state of mind and mind-set has helped to improve my work ethic. Now I know what I'm good at, I have changed my belief system and mind-set. (Boy 1)

However, one boy explained how he was a little sceptical about the modification of his belief system and how this changed.

Modifying my belief systems helped when I thought it wasn't going to work. Now I can do it [learn better via a modified belief system]; I've begun to realise this. (Boy 7)

Another boy explained how his belief system was influenced by his family. He states:

My Dad is very 'realistic'; my mum gets very stressed. [They both] express degrees of negativity and this has fed, negatively, into my experience and psyche. The [intervention] made me aware of my own negativity; this is now wearing off. (Boy 8)

The following comment serves to demonstrate the position of consensus of the group:

I just prefer to be positive in all my beliefs. I know that in all reality there are some things that I may not be able to do as well as somebody else. But, that doesn't mean I shouldn't try. (Boy 5)

Question 3: Appreciating the supposition of the 'Reticular Activating System' and associated perceptions of the boys.

The third supposition to be explored related to the Reticular Activating System (RAS). Although this is a complex concept all the boys demonstrated understanding of the importance of the RAS.

[The RAS is an explanation as to how] beliefs follow well-trodden pathways that may be challenging to change. It definitely has relevance [to understanding belief systems]. Learning about the RAS has helped me to try and build more positive pathways. (Boy 2)

Two of the boys provided narratives of their experiences in relation to learning and how an understanding of the RAS has enabled them to perceive their learning in a more positive way:

As I got older there are negative thoughts like "I can't do maths". On the flip-side there are different positive thoughts. So, over time I'm 're-tarmacing' these

neural pathways into something new. You can take pleasure in knowing that what were once negative thoughts have changed to positive thoughts. (Boy 8)

My negative pathway at the moment is sitting this [forthcoming] exam, but in the end I know I will feel elation, this rush. This is the feeling I'm aiming for and this is what keeps me going. I know things will change very soon and a new neural pathway will be created. (Boy 3)

However, one student was less enthusiastic about the contribution of the RAS to his learning:

I believe in the concept but I don't know how much I use it myself.... There are a lot of things going on in my head. (Boy 9)

Question 4: Appreciating the supposition of the 'Comfort Zone' and associated perceptions of the boys.

The boys expressed a range of views about their understanding of the comfort zone. However, it is interesting to note that there was not a strong position of consensus. The positive comments coalesced around views such as this:

It's good to push yourself [outside of your comfort zone] but this could lead to stress. I quite like to stay in my comfort zone and just push myself occasionally.
(Boy 1)

A similar view was held by another boy:

I love my comfort zone, everybody needs one both physically and mentally. However, things can and will always change and this is when you must push the boundaries of your comfort zone. Where there's change your comfort zone also changes. (Boy 3)

This was supported by the view:

..... you realise that [stepping out of your comfort zone] is a small price to pay as you are guided by a feeling of restlessness, [a sense] that something needs to change. (Boy 5)

However, there were some boys who were less keen to extend the comfort zone:

It's useful to me to have a smaller comfort zone. I'm a bit habitual; [I like] doing things in a similar way. My comfort zone is somewhere I can retreat back into. (Boy 4)

One theme that did emerge is related to the idea that the boys, alone, should be in control of extending their comfort zone; not the teacher or a significant other:

[Understanding] the comfort zone is about personal change and not the imposition of change by someone like a teacher. (Boy 8)

I try to push through my fear [and extend my comfort zone]. It's something that I want to do rather than having it imposed by somebody else. (Boy 7)

Question 5: Appreciating the Technique of Change of 'Goal-setting' and associated perceptions of the boys.

It should be noted that goal-setting was somewhat of a contentious issue in relation to the value of long-term and short-term goals. Some boys appeared to see the value of long-term goals whilst others favoured the use of short-term goals. For example, one boy stated:

Goals are easy to predict [set] and come up with. A school itself is a structure and so it is easy to link goals to that structure. Long term goals let me look at where I would like to be in the future generally. (Boy 1)

This boy provided his narrative as to the value of long-term goals for his learning:

I feel it's important to have very clear, precise long-term goals..... I reached a point in Year 10 where my goals became clear. I looked into going to uni[versity] in America and this is what I wanted I could picture myself there..... I had a picture [in my mind] in 15 years time looking at live images coming through [of my future]. I had this image in my head and it was fantastic. This has inspired me to work even harder. I've decided where I want to work and everything is planned. (Boy 8)

However, other boys spoke more about how they valued the use of short-term goals:

I lose track of [long-term goals] a little bit unless I reset them. I barely plan in the long-term such as 3 years ahead. Short-term goals are set and re-set [modified]. Long-term goals have less value. (Boy 9)

I lose motivation to keep going with long-term goals. I use short-term goals as my life continually changes. (Boy 2)

The notions as to the possible benefits of short-term goals are highlighted in the following narrative:

I appreciate after engaging [with the intervention] that [short-term goals] would work better for me. I think realising what works for you is best. (Boy 3)

It was interesting to note that the majority of boys had very specific ideas about who is responsible for goal-setting. This is exemplified in the following comment:

Goals should be set by me. It's good to have your own goals but not goals set by your teacher and parents. (Boy 8)

Not all boys were in favour of goal-setting and one, in particular, made this comment:

I don't really find goal-setting useful. I may do some unconscious goal-setting such as "I want to pass that exam" or "I want to do that". I don't consciously set

goals..... I just get on with things and it kinda happens. There is not an overt process. (Boy 7)

Question 6: Appreciating the Technique of Change of 'Affirmation(s)' and associated perceptions of the boys.

The boys, without exception, spoke in positive terms about the value of affirmations. A position of consensus was illustrated via the following comment:

[Affirmation] helps with building positive thinking..... Positive affirmation is essential. [Affirmation] may reinforce the pathways in the RAS. Affirming to yourself positively [makes it] more likely that you will try new things and succeed. (Boy 1)

One boy shared a specific technique that he uses in relation to affirmations:

I do use affirmations. It's useful to look in the mirror and talk to myself about it..... I've started doing it more recently. I do look in the [actual] mirror. It's easier to be rational with yourself if you're looking at yourself. [It feels] odd being objective with and about yourself; but it is beneficial to me. (Boy 7)

Another boy had noted:

I try to [notice] bad thoughts and see that they are not necessarily true. I get past them by using [affirmations] more actively and in a more focused way. (Boy 4)

There were no dissenting voices amongst the boys with regards to the value of affirmation and is best summarised in this final quote:

I really like affirmations..... I feel more positive and the issue [whatever it is] appears less complicated (Boy 5)

15. DISCUSSION

This study demonstrates that educational action research can provide the basis for transformative change and critical reflection [Koshy et al. \(2011\)](#). The boys, in this study, were members of a focus group and all spoke, albeit in differing terms, about their experience of four suppositions and two Techniques of Change associated with NLP and the effects on their learning.

Whilst there is limited reference in the literature to suppositions and Techniques of Change [Gray \(2000a\)](#); [Gray \(2000b\)](#) associated with NLP and learning the researcher felt the experiences and perceptions expressed by the boys' provided insight into aspects of NLP and learning for boys in a post-16 context.

Four specific suppositions were examined in relation to learning. The first was state of mind and a positive state of mind ensures that learning occurs. In the context of learning, the boys identified two psychological themes that impact learning; these were 'stress' and 'mood'. It is acknowledged that these two concepts were not specifically defined by the boys; nonetheless, this does provide teachers with an opportunity to reflect on how they could better meet the needs of boys when considering state of mind in their various learning and teaching contexts. When the boys spoke of a negative state of mind, they also explained that they endeavoured to

modify, to varying degrees, a negative state of mind into a positive state of mind as this was perceived as beneficial to their learning. The second supposition relates to belief about the ability to learn. The boys' views coalesced around a viewpoint that a positive belief system is very important to their education and learning. The modification of a belief system in the positive juxtaposed positive state of mind contributes to a more positive view of learning. The boys did acknowledge negative beliefs and the need to confront such beliefs. In short, it appears that positive belief about the ability to learn is essential for these boys. The third supposition examined experiences and perceptions related to the Reticular Activating System (RAS). This evidence suggests that boys had developed an awareness of the RAS and its possible impact on their learning. The boys were able to modify neural pathways to challenge negative thoughts about their learning; especially in relation to perceptions about their ability in a specific subject or their ability to successfully complete exams. All the boys felt, albeit to differing degrees, that an understanding of the RAS enabled them to gain an increased insight into both their learning and themselves.

The fourth supposition was linked to the comfort zone. The boys developed an appreciation of the importance of the comfort zone in relation to their learning experiences. However, there was a range of responses to personal challenges and the extension of the comfort zone. Many of the boys were reluctant to 'step out of' or 'push' their personal comfort zone. It seems clear that this is an area that requires further investigation as to ascertain why this reluctance exists when there is a more general perception that extending one's comfort zone provides a variety of rewards in a variety of contexts. The completion of such research that would provide deeper insight into this supposition and cognitive state.

The aforementioned observations are summarized in [Table 1](#).

Table 1

Table 1 Summary of Student (Boys) Perceptions					
Supposition	Very Important in Understanding My Learning	Important In Understanding My Learning	Neither Important or Unimportant In Understanding My Learning	Unimportant in Understanding My Learning	Very Unimportant in Understanding My Learning
State of Mind	✓				
My beliefs	✓				
Reticular Activating System (RAS)	✓				
The Comfort Zone		✓			

Two specific Techniques of Change were examined in relation to the boys' learning experiences. The first was goal-setting and it would appear that for the majority of the group goal-setting is perceived as a useful Technique of Change for learning. However, the contentious issue relates to individual preference in the selection of either long-term or short-term goals. Some boys preferred the setting of longer-term goals that enabled them to map out their future in the long term. Other boys were aware of a continual change in their life and thus the need to modify goals

in the short-term to enable successful learning. One key theme to emerge was the need for the boys to be in charge of their goal-setting. Teachers are in a position to mentor the boys; but it is the boys who must select their goals whether they are long-term or short-term goals. The observations from the boys were that affirmations are a positive tool in the arsenal to support learning. At times boys may experience a negative state of mind; but the use of affirmation enables a change to a positive state of mind. At no point did any boy speak of affirmations in the negative. Affirmations are valuable to the learning process for the boys.

The aforementioned observations are summarized in [Table 2](#).

Table 2

Table 2 Summary of Student (Boys) Perceptions					
Technique of Change	Very Important in Understanding My Learning	Important In Understanding My Learning	Neither Important or Unimportant in Understanding My Learning	Unimportant in Understanding My Learning	Very Unimportant in Understanding My Learning
Goal Setting		✓			
Affirmations	✓				

The unique position of teacher-as-researcher has enabled specific insight into how the boys learning could be influenced by four suppositions and two Techniques of Change. This focus group case study provided an opportunity to explore and observe phenomena closely and “to render it in some way intelligible” [Golby \(1994\)](#). The unique nature of this study may also, indirectly, contribute to a better understanding of how NLP strategies could benefit the resilience of the boys in post-16 education [Nash et al. \(2021\)](#). These findings, whilst limited, offer critical insight into suppositions and Techniques of Change associated with NLP and learning and thus contribute to living educational theory (LET) [\(Barry, 2012\)](#).

This study was conducted in a Community College in the south-west England. The researcher acknowledges that his observations may be “framed” and “filtered” by this specific social situation [Berg and Eikeland \(2008\)](#). The small sample size limited the possibility to achieve substantial analytical generalisation as supported by [Yin \(1989\)](#). Moreover, the sample was composed of participants identifying as male and white British; this does not reflect the broader mix of gender and ethnicities more typically evident in England and Wales.

There is evidence of resistance to this study (see [Toro and Werneck \(2007\)](#)) as the sample was only nine boys who self-selected to participate in this study. The original plans for the study were more ambitious. It was intended to include the whole cohort of Year 13 boys; however, the majority of boys declined to participate. This may have been because there were misgivings on the part of the majority of boys, in this year group, about the research. Many of the boys in the cohort may have not related to the project [Cargo and Mercer \(2008\)](#); they may have felt their commitment to learning was being challenged.

Coaching is seen as a useful intervention in educational organisations. This specific study, did provide the boys with the ability to reflect on their current perceptions about learning and consider various alternatives that may enhance their engagement with learning. The boys could progress with their learning by engaging with positive change. By considering the ideas originally presented by [Gray \(2000a\)](#); [Gray \(2000b\)](#) relating to suppositions and Techniques of Change

associated with NLP the boys were able to examine aspects of their learning more purposefully. Such an intervention could be utilised alongside contemporary educational theory such as growth mindset [Dweck \(2017\)](#) and cognitive load theory [Centre for Education Statistics and Evaluation \(2017\)](#).

Findings from this single site, multi-voice small scale study of NLP suppositions and Techniques of Change in relation to learning must be viewed through the context of several limitations. First the participation rate was low. Second, whilst the semi-structured interviews provided insight into the perceptions of the boys relating to suppositions and Techniques of Change associated with NLP in connection with learning such findings cannot be generalised to other settings. The qualitative data is also limited due to the lack of observations from significant others such as parents, teachers, and friends in the boys' lives. Third, the use of a self-selected sample limits the validity of the findings. Future research into NLP suppositions and Techniques of Change in relation to learning would benefit from a more diverse sample and differing age cohorts. The inclusion of individuals from the BAME social group would enhance such research. The inclusion of females in such a study would also permit gender comparison. The implementation of a randomised group trials together with quantitative and qualitative research tools that can effectively measure NLP contributions to learning would enable greater insight into these concepts as advocated by [Saunders et al. \(2023\)](#). Fourth, it may have been more appropriate to use close-ended questions as this permits the use of data-coding and analysis thus ensuring the reliability of the study. That said, the teacher-as-researcher did not want to lead participants to particular answers via "filtering" and "framing" in the context of this research (see [Berg and Eikeland \(2008\)](#)). The open-ended questions gave respondents the opportunity to answer freely without having to categorise answers into a given response. In addition, this then enabled the teacher-as-researcher to pursue other areas of interest. Fifth, there was the possibility of social desirability effects may have influenced the research as, for example, participants may have wanted to please their teacher-as-researcher by providing what they believed to be acceptable answers. Sixth, further research should reference other suppositions such as limiting beliefs and negative expectations and other Techniques of Change such as pattern breaking and the Swish technique to provide greater depth of understanding of NLP in relation to learning.

The benefits of this research should not be ignored. The participants were assured that their data would be anonymised, and the results would not affect their relationship with the teacher-as-researcher. The participants had been asked to be honest in the way that they reported their experiences. The researcher had no reason to think that they had done otherwise. The use of analytical generalisation (see [Yin \(1989\)](#)) enabled the Principal, Sixth Form leadership team and teacher-as-researcher to engage with the inner-most thoughts, feelings, and experiences of the boys by listening to positions of consensus (see [Kudliskis \(2019\)](#)) and their individual utterances. These findings were then, more broadly, shared with middle leaders, teachers, and other stakeholders.

It was intended that this research would not be "done" to the boys [Purdy and Spears \(2020\)](#). The purpose of this study was to foreground the voices of the boys. This innovative piece of research was initiated as an exploratory study. The research was designed to provide the school with a better understanding of how four NLP suppositions and two Techniques of Change may benefit the learning for a specific cohort. These initial findings should provide impetus for further research in a range of educational contexts.

16. CONCLUSION

Action research, in particular LET, conducted in educational contexts provides professional insight into teaching strategies. This specific piece of LET research examined how some NLP suppositions and Techniques of Change may contribute towards and possibly enhance learning needs for boys in post-16 education. Such research is of interest to teachers, leaders, educationalists, and other stakeholders. Such insight may not be achieved when conducting positivist research.

There is limited theoretical material relating to NLP suppositions and Techniques of Change and how they may enhance learning. That which does exist is often grounded in grey literature. The teacher-as-researcher elected to examine NLP suppositions and Techniques of Change in relation to learning as a critical observer and commentator. The purpose of this study was to contribute to living educational theory (LET) and to provide a foundation for further research in this area.

Whilst only a single research tool was used, the qualitative data gained provides insight into the perceptions and reflections of a small group of boys in relation to four NLP suppositions and two Techniques of Change in the context of learning. The data provides some tentative evidence that some NLP suppositions and Techniques of Change impact positively on engagement with learning.

It should be noted that direct or indirect subject effects and demand characteristics may have impacted the research. The study may have been influenced by unintentional subject effects on the part of the boys. The teacher-as-researcher may have unintentionally demonstrated demand characteristics. The teacher-as-researcher endeavoured to be systematic in the research process and liaised closely with a 'critical friend' to ensure that he, the researcher, remained grounded throughout the whole process. The teacher-as-researcher believes that all participants provided honest reflections of their inner-most feelings, perceptions, and experiences.

It should be acknowledged that the teacher-as-researcher endeavoured to ensure that the research was not simply done to the boys. The study, as a whole, was a collaborative process [Purdy and Spears \(2020\)](#). The voices of the boys were foregrounded and the research process provided a form of value in learning as the boys gained greater insight into NLP suppositions and Techniques of Change in relation to learning. To this end, the following comments reflect the broader positions of consensus of the group.

This intervention does seem to have had an effect. I can be more positive when things are on my mind. (Boy 5)

It can often appear that research is "done" to the participants. I felt that I was "heard" and I also feel that this was a positive experience..... (Boy 1)

In sum, this was an exploratory study, and the findings are limited. Nonetheless, the study provides a lens through which to examine and understand how four NLP suppositions and two Techniques of Change may impact learning for boys in post-16 education. Knowledge of some of the NLP suppositions and Techniques of Change appear to have helped the boys engage more effectively with their learning and enhanced self-awareness and self-development in their learning context. These initial findings indicate there is potential for further research in this area.

17. APPLICATION IN SCHOOLS

Whilst the findings in this research are limited some progressive schools, with a post-16 cohort, may wish to introduce and discuss with students the notion of NLP suppositions and Techniques of Change with regards to learning. This would enhance engagement with learning and provide students with greater insight into inner-most feelings and experiences. At a practical level, implementation of such discussions could be organised through teacher-student tutorials and student peer-coaching programmes. An initial tool and valuable starting point for such a programme would be to read the book "Teaching for Excellence" written by Richard Bandler and Kate Benson. Similar programmes could be introduced into primary and secondary school settings. The value of such interventions could then be appraised through further research in these specific educational contexts.

CONFLICT OF INTERESTS

None.

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APPENDIX 1

Four suppositions and two Techniques of Change Associated with NLP and Learning

Interview Schedule

Preamble and Question 1: Given your exploration and understanding of beliefs in relation to learning to what extent, if any, do you think that your beliefs influence your learning? What is your personal experience relating to beliefs and learning? Please give an in-depth response to this question. I may ask further questions if appropriate.

Preamble and Question 2: Given your exploration and understanding of state of mind in relation to learning to what extent, if any, do you think that your state of mind influences your learning? What is your personal experience relating to state of mind and learning? Please give an in-depth response to this question. I may ask further questions if appropriate.

Preamble and Question 3: Given your exploration and understanding of the Reticular Activating System (RAS) in relation to learning to what extent, if any, do you think that your RAS influences your learning? What is your personal experience relating to the RAS and learning? Please give an in-depth response to this question. I may ask further questions if appropriate.

Preamble and Question 4: Given your exploration and understanding of the comfort zone in relation to learning to what extent, if any, do you think that your comfort zone influences your learning? What is your personal experience relating to the comfort zone and learning? Please give an in-depth response to this question. I may ask further questions if appropriate.

Preamble and Question 5: Given your exploration and understanding of goal setting in relation to learning to what extent, if any, do you think that goal setting influences your learning? What is your personal experience relating to goal setting and learning? Please give an in-depth response to this question. I may ask further questions if appropriate.

Preamble and Question 6: Given your exploration and understanding of affirmations in relation to learning to what extent, if any, do you think that affirmations influence your learning? What is your personal experience relating to affirmations and learning? Please give an in-depth response to this question. I may ask further questions if appropriate.

Conclusion of the interview: Are there any comments that you would like to make about your personal experiences in relation the research process and your participation in this research study?