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The Adult Singing Student's Mindset – Is it an Important Consideration in Vocal Pedagogy?: Trialling a Schema to Investigate the Impact of Student Mindset on Goal Achievement in the 1-to-1 Singing Lesson

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Project proposal

Project Title:

The Adult Singing Student's Mindset – Is it an Important Consideration in Vocal Pedagogy?: Trialling a Schema to Investigate the Impact of Student Mindset on Goal Achievement in the 1-to-1 Singing Lesson

The Context and Justification

Teaching contemporary singing to children and adults for over two decades has resulted in observations that a student's mindset can significantly impact their progress both negatively and positively. This notion is supported by academic research that suggests people's perceptions of their ability plays a key role in motivation and achievement (Haynes et al., 2016; Dweck, 2015). In exploring the singing teacher's understanding of their students' mindset, the research undertaken in this study considers the impact this has on cultivating instructional methods and feedback on learning outcomes for the student, although this is dependent on teacher epistemology and their beliefs surrounding knowledge acquisition (Letina, 2022). The study therefore investigates epistemological theory in education whilst determining vocal teaching epistemology surrounding mindset and its effect on goal attainment.

The research requires students of more developed mindsets and therefore will require only adult participation. This decision is considered from the understanding that adults have more advanced cognitive skills that facilitate abstract thinking to comprehend and infer, compared with children (Viola and Shiyang, 2014). Initial research in module BMPF7013F suggests that understanding general mindset as a means to promote student development in education to be a valid consideration (Rhew et al., 2017; Richardson et al., 2021; Cheng and Leung, 2021; Boaler, 2013; Felder and Brent, 2005). It is plausible this notion could be a transferable model to the singing studio since there is literature pertaining to mindset in music and performance in academia. For example, Broomhead and Skidmore (2010; 2014) consider mindset in expressive performance quite prolifically as they offer advice to music students to develop expressive mindsets (2014) and discuss the effect of positive mindset trigger words (2010), whilst Davis (2016) explores the role of error in learning in the music classroom as a means to develop a growth mindset, and Pike (2020) discusses the implications of tutor feedback on music student's mindset. This current research sets out to develop upon existing research in academia and builds upon the theories reviewed in module BMPF7013F.

The Intended Impact

A culmination of literature review and research data analysis aims to explore how teaching methods might be affected by better understanding the implications of student mindset. It is proposed that the researcher's own teaching and that of the wider teaching community may be impacted by the newly detailed suggestion to motivate students by using appropriate terminology in instruction and feedback. Rimm-Kaufman and Sandilos (2015) and Meyers and Rowell (2019) consider a mutual understanding between teacher and student of the student's mindset, could potentially forge an even better working relationship and capacity to utilise this learnt knowledge to aid more progressive student development.

The interviews to be conducted with research participants who are vocal trainers, partially serves to gauge current interest and likelihood of teacher participation in this method of teaching. Certainly, if data results and literary review suggest misgivings for incorporating mindset profiling, then this project serves to offer insight to future teachers who wish to incorporate such a method in their teaching.

The Outlined Intention

This project seeks to ascertain and promote current knowledge and opinion surrounding student mindset in the singing lesson through interviewing singing teachers. It will explore how the individual student's mindset might govern the instruction and feedback of the teacher to the singing student (Zeeb et al., 2023; Jennings, 2021). The schema designed in module BMPF7013F (Appendix 1) and developed in this study (Appendix 2) will be used and tested in the practical research element to accumulate qualitative data.

Whilst evidence exists in support of the consideration of the student mindset in singing (Titze, 2022; Broomhead et al., 2012; Joubert, 2022), this study, in part, seeks to determine current teacher knowledge and opinion and if they consider the following:

- an awareness of student mindset (including general, creative and singing mindsets),
- utilisation of mindset measuring tools in their lessons,
- regard it as important in their current method of teaching,
- vary their instruction and feedback to meet individual student needs,
- consider appropriate use of vocabulary in alignment with mindset in instruction and feedback to the student,
- Use goal setting for student development and if so, how is this measured?

Understanding teacher responses will provide an insight into the potential usefulness of the schema as a teaching model. The results will determine if there is a deficit in mindset training in the singing lesson and will inform the development of the schema for singing teachers to incorporate into their lessons. This will enable them to comprehend better the advantages and limitations of understanding the student mindset, leading to a more comprehensive and holistic singing education (Sell, 2005).

The literature review will incorporate text from academic journals, reports, books, blogs and web content, whilst locating relevant studies to support the practical research of this project (Uman, 2011). The aim is that the review will find studies from multi-disciplines to support the schema development and its implementation and will validate its use in the singing studio.

The practical research will incorporate testing the schema and two semi-structured interviews. Up to five singing teacher participants will be recruited from a purposive sample of more than three years' teaching experience, so that they have some experiential knowledge to draw upon (Palinkas et al., 2015). The interviews will be composed of open-ended questions to elicit rich qualitative data to ascertain singing teachers' understanding of student mindset, their views on its place in the singing studio, and whether they have already considered it in their lessons, or if following this interview, they would consider implementing teaching methods surrounding it. Participants will be asked to employ the schema designed in their teaching over three to four sessions, proceeded by a second semi-structured one-to-one interview to evaluate how useful they found implementing the schema in their lessons.

Since the participants are not known to the researcher at the time of planning the project, they will be sought through the University of Wales Trinity Saint David (UWTSD) and online sources such as social media platforms, through emailing and posting a research recruitment poster. It may be difficult to find participants who have time to engage in the project, so interviews will be condensed to an agreed amount of time. To mitigate geographical issues, online interviews will be offered. Face to face interviews risk participants not attending and online interviews can facilitate finding someone new more quickly (Lobe and Morgan, 2022).

Questions that require simple yes and no answers will be avoided in favour of those that evoke fuller responses and provide valuable key data for thematic analysis. Employing inductive and deductive coding will facilitate voluminous data for insightful analysis (Liamputtong, 2009), to establish an understanding of whether current teaching trends may

change based on the information I have provided to the teachers (Schmidt, 2004). The report and conclusion will be informed by content analysis to answer the research question (Zhang and Wildemuth, 2009).

The proposed timeline is presented as a detailed GANTT chart:

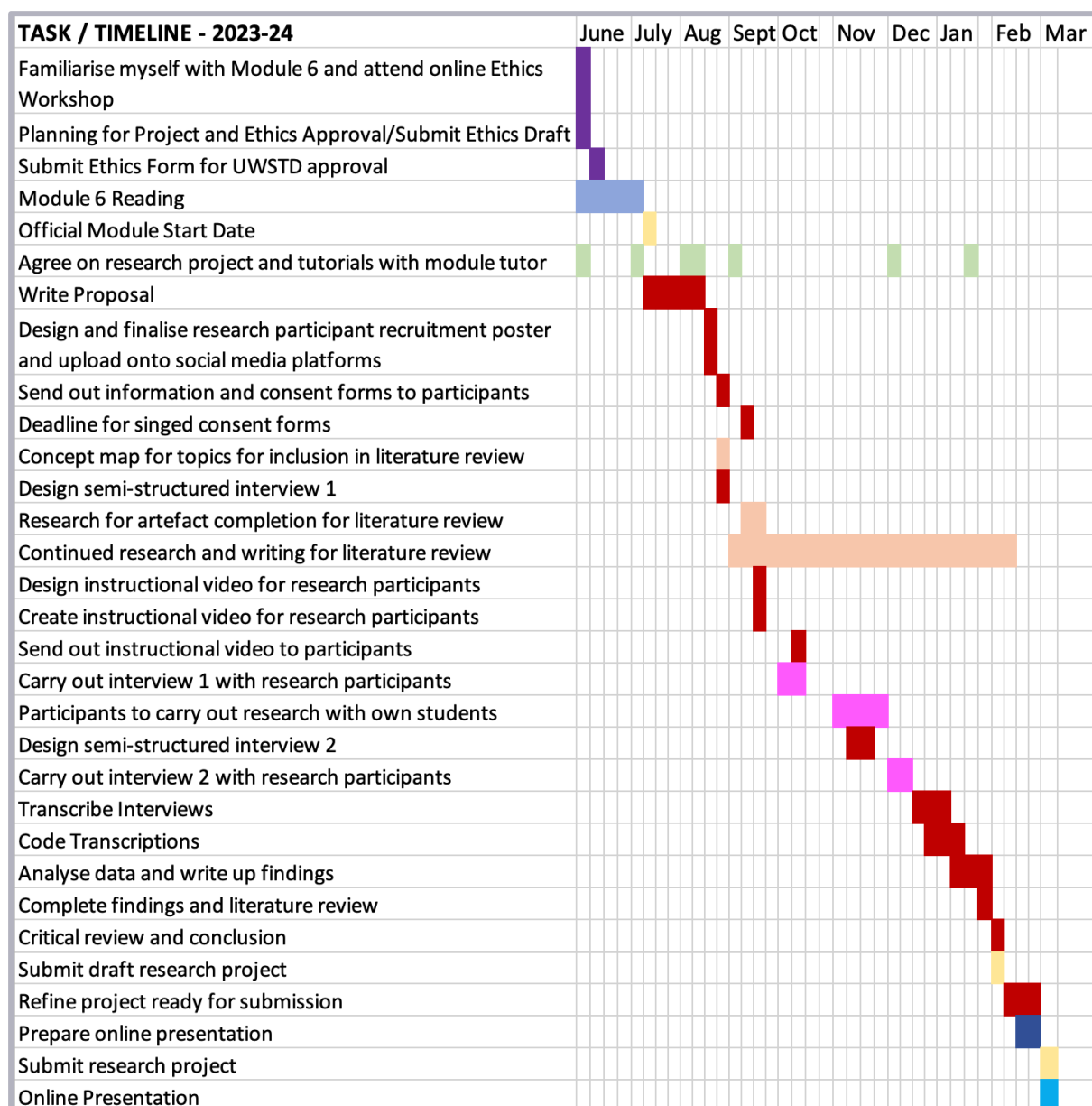


Figure 1. GANTT chart of Proposed Project Time-Line

The Ethics and Insider Research

Certain personal investment in the outcome of the research is best mitigated by considering other possible outcomes. A deeper introspection or reflective and reflexive process can guide the project toward a more rounded interpretation (Greene, 2014).

Whilst any questions posed to participants and their students are not intended to be intrusive, it must be considered that triggers pertaining to psychology are possible (Crum and Zuckerman, 2017), and if any problems occur, these would be referred on to appropriate teams in the mental health care sector. A supporting handout with suggested mental health support teams can be found in Appendix 3. Any reference made to the term psychology within the study is alluding to the teacher's ontology surrounding understanding of their student as an individual, rather than in depth knowledge that only a trained psychologist should ethically be aware of. Ethical principles and codes of conduct are stringently adhered to by psychologists (American Psychological Association, 2024); something beyond the jurisdiction of a vocal teacher unless working in consultation with clinical psychologists (Mahony, 2022).

This research takes into consideration the possibility of resistance from singing teachers to employ the schema into their lessons. Heslin and Keating (2017) suggest that teachers need to be in a learning mode to accept development of their experiential knowledge and need to come from a position of a growth mindset themselves to embrace new theories in their model of teaching. Gerstein (2015) asserts that the teacher's mindset can be developed by enabling the teacher to understand that they are learning in the same way as the student.

Overall sensitivity in data protection and mindfulness of the psychological content of this work will be ensured through confidential survey software and password protection. The project has passed UWTSD's ethical review process.

The Expected Learning Outcomes:

This study aims to expand upon personal understanding of philosophies, paradigms, methodologies, and theories developed over the course of the MA in Vocal Pedagogy. Seeking to refine reflective and critical analyses skills, this project will develop upon a specific area of psychology within vocal teaching that the researcher can build upon in the future, to produce further frameworks of teaching and literary, publishable content.

The Adult Singing Student's Mindset – Is it an Important Consideration in Vocal Pedagogy?: Trialling a Schema to Investigate the Impact of Student Mindset on Goal Achievement in the 1-to-1 Singing Lesson

Introduction

The term 'psychology' has been adopted throughout this project since it serves as an encompassing term to describe an individual's mind and behaviour (Schacter and Gilbert, 2015; Westerman and Steen, 2007). Mindset has been studied in psychology and influential in education for decades (Schroder, 2021; Kapasi and Pei, 2021) and whilst vocal teachers are not generally trained psychologists (Hallam, 2009; Fletcher and Krause, 2023), they should hypothesise about their student's schema and subsequent effects on their learning development in line with coaching theory (Riddell, 2021). Importance is placed upon psychology in the singing studio as Yang and Yu (2023: 1) consider 'Vocal singing uses a thinking, conscious person as an instrument that is necessarily governed by the psyche over the physiology'.

Experiential knowledge gained from teaching singing to adults and children within the genre of Contemporary Commercial Music (CCM) for over twenty years, supports the notion that there is more to teaching singing than textbook physiological methods. Considerations pertaining to this postulation include the psychological implications of student self-schema and self-perception, in particular with regard to how we hear our own voice (Kimura and Yotsumato, 2018; Hogle, 2020; Hughes and Nicholson, 2010); preferred style of learning, that is, the use of mental imagery and metaphors (Jaber, 2020) or kinaesthetic learning (Crocco and Meyer, 2021); and even the complexities of authentically feeding back to the student (Ohrenstein, 2003). Such findings have highlighted the need to teach students based upon individual characteristics, since one method of teaching will not suit all students (Bondi, R., Dahnke, C. and Zusho, A., 2019; Pratt, 2002).

Awareness of profiling an individual's mindset prompted exploration into the questions that might be asked on such a profiling tool and led to further discovery that the tool had been developed for a creative mindset. Both sets of profiling tools were introduced in module BMPF7013F and can be found in Appendix 4. Determining individual mindset is used in healthcare teams (Grayson, 2015), school and college education (Yu and Mclellan, 2020) and sports arenas (Wanner, 2019), however, evidencing use of profiling tools in academic research has proven difficult. Determining creative mindset (Karwowski, 2014) is an emerging discipline and equally difficult to evidence. It was due to such lack of research and

the postulation by Burgoyne and Macnamara (2021) that the mindset profiling tool is more akin to the individual's need for cognition and goal orientation, that the decision to adapt the mindset profiling tool for singing was conceived (Daniels, 2023). The singing mindset template developed in module BMPF2013F can be found in Appendix 5.

A recent emergence of blogs and articles on correlations drawn between mindset and singing (Titze, 2022; Adams, 2019; Broomhead et al. 2012) suggests an area worthy of development, and since rigorous research has found no teaching models linking mindset and goal attainment in the singing lesson, there is an apparent gap in vocal pedagogy that can be explored. As such, this study develops upon the artefact design of module BMPF7013F, a schema that considers whether a vocal teacher could potentially 'measure' a student's mindset (Dweck, 2016), and use this information to tailor teacher instruction and goal attainment feedback to individual students. With goal setting deemed as integral to pupil engagement and motivation (Anderson, 2013; Winkelmes, Boye, and Tapp, 2019) and an important measure of development (White, 2002), correlations between goal attainment and student mindset were made, and a teaching model was developed to incorporate mindset specific instruction and feedback as a mode to understand the individual student's psychology (Kubat, 2018).

An Overview of the Schema

The schema has been devised as a tool for singing teachers with the intention of explaining:

- about growth and fixed mindset in accordance with the research of Dweck (2016),
- a method of measuring their student's mindset using a singing profiling tool (Daniels, 2023),
- Teacher/student reflective feedback is important for motivation for attaining goals,
- The teacher should consider the individuals mindset as to how they feedback to the student about goal attainment.

Conclusions drawn from module BMPF7013F indicated that further investigation could support the development of a student mindset and goal orientated framework in vocal pedagogy by:

- Testing the schema in singing lessons with participant vocal teachers, to ascertain the strengths and weaknesses of the design and conclude its usefulness as an integral part of a singing lesson plan,
- Exploring how other teachers find students engaged with using this schema.

This study investigates whether the schema can be considered a viable voice teaching model and if it can positively impact both student and teacher when considering teacher epistemology. Smith (2024) states that effective engagement in pedagogical practices require belief systems to support approaches to teaching. In context of this study, the term epistemology is defined as opinions and beliefs held by individual teachers that forms their current model of teaching and whether these are malleable (Soleimani, 2020). A teacher or educator in an area should be continually learning (Ng, 2019; Louws, 2017), but as Heikkila et al. (2023) considers, there is a lack of understanding of epistemic aspects in general teacher education, and it seems probable that this too, is the case for vocal teachers.

Aims of the Study

- To understand current trends in mindset consideration in the one-to-one singing lesson, how this might be developed if appropriate, and why it should not be developed if deemed ineffective.
- To complete the schema from module BMPF7013F ready for utilisation in participant research,
- To develop current mindset research to become specific to the singing studio,
- To inform vocal teachers of their responsibility to consider students as individuals and motivate them by using appropriate terminology in instruction and feedback.

Objectives of the Study

- To establish the impact of students' singing mindset on goal-setting development,
- To understand the malleability of teacher epistemology,
- To make improvements to the schema following the research to create a teaching model that can be used in the wider teaching community if deemed appropriate.

Literature Review

An in-depth scope of literature prior to this study has identified a gap in research surrounding the effect of mindset on goal attainment, specific to the singing lesson. This literature review will not seek to find and validate links between mindset and goal setting since such a study was completed in module BMPF7013F. However, it will draw upon a body of research to evidence how successfully mindset profiling and goal setting has been perceived in other fields of study. Determining the need for interdisciplinary research to cohesively synthesize information drawn from various fields, suggests a thematic review would be beneficial in the structure of this section (George, 2023). Combining a narrative review method seeks to provide fuller answers (Zelcane and Pipere, 2023) to support the transference of theoretical discoveries to the singing lesson (Lincoln and Guba, 1985), and to develop the schema and consider its potential implementation into one-to-one singing lessons following this research. The literature review will consider the following:

- Mindset and Goal-Attainment
- Considerations of student psychology in education and vocal teaching
- Current trends in general and vocal teaching epistemology
- Considerations of Implementing the Schema

Mindset and Goal Attainment

Dweck and Leggett (1988) posed that an individual's belief about their intelligence affects goals set and attained in an educational setting. Such a notion is supported in the work of Richardson and Bledsoe (2020), which underpins the utility of mindset in science, technology, engineering and mathematics (STEM) disciplines, as a social-cognitive approach to motivation and determining how individuals conceptualise their goals. Evidence that goal-setting activities promote a growth mindset is exemplified in the study of Woods (2020) who assessed student mindset and their engagement with goal setting activities. Woods' study was conducted over two semesters to prepare students in the field of Information Technology (IT) to become lifelong learners. The premise of the study sought to expand course activities to help develop a growth mindset, to set goals, and to facilitate attainment of these goals. The goals set within the research were not linked to specific IT course projects. Measurements were put in place to analyse student perception of the goals, so that they might guide further development of the activities. Such measuring system guides the schema design of this research project as each student is asked feedback on a goal attainment record sheet (Appendix 2:a). Furthermore, each research project conducted by Woods (2020) was completed across three weeks, a timeline that will be utilised for the research aspect of this project due to time restrictions. Of thirty-three students who

participated in the study, only one failed to complete the assignment, although no reason is given as to why. The use of the Likert scale (Taherdoost, 2019), where students were asked to agree or disagree with statements regarding the goals, informed the measurement of the student surveys and gave insight that a clear majority of 69 – 88% of students agreed that they saw value in the different goals set for the activities and 69% of students agreed that the activities prompted continued self-improvement. Whilst Woods considers all students demonstrated a growth mindset through the study, the presence of a growth mindset could not be indisputably linked to the activities. The study is vague in recording of mindset results of the students and makes it difficult to quantify the correlation between the two. The schema of this current project will be more detailed in the mindset results of the participants' students to understand if any further links can be made.

A further study conducted by Poe et al. (2021) (of which it should be noted Woods is a co-researcher and is cited within the study, suggesting possible bias to the outcome), similarly looks at ascertaining student engagement in goal setting activities in the university sector of IT. In the case of this study, students were asked to feedback about their perceptions of progress using the Likert scale and through discussing what was and was not going well. The study concluded that planning activities and student reflection increased ability to succeed, as goal setting was deemed as positively impactful based on student's perceptions of success. Nonetheless, it was felt that continued research into the effects of mindset on goal setting required continued investigation.

Yu and McLellan's (2020) study of 535 maths and English students aged fourteen-sixteen investigated the unlikelihood of same mindset individuals belonging to a homogenous group. Whilst they considered existing research suggests specific mindsets are orientated towards specific beliefs and goals, the study showed that varied nuances effect such outcomes. According to Yu and McLellan, consensus in mindset and goal setting research suggests individuals of a growth mindset set mastery goals and those of a fixed mindset seek performance goals and display self-defensive behaviour. However, in their study, a discovery that some growth mindset students strive for mastery and performance goals equally, whilst some fixed mindset individuals lacked engagement altogether. It was concluded that further investigation was required into the integration of the individual motivational beliefs and goals of students.

The studies above emphasise the need for further research in the area of the interactions between mindset and goal setting. The analysis of data from the practical element of this research will seek to corroborate the findings and provide additional information.

Considerations of Student Psychology in General Education and Vocal Teaching

A critical element of the schema is understanding the importance of student psychology and its impact on the voice lesson. If considered unimportant, the schema could become invalid. Whilst vocal teachers cannot be expected to be trained psychologists, understanding the student as an individual can be easily implemented into the teaching model of general education as deemed appropriate in the research of Hoy (2010) and Felder and Brent (2005), although extensive research has been vague in determining if this is the case in the one-to-one vocal studio. Latukefu and Verenikina's (2010) postulate that in the singing lesson setting, a student's ability to develop their skills must be carefully constructed by the teacher in close connection to the student's characteristics and experiences. Barefield (2006) considers that the student's developmental success is dependent, in part, on the teacher's ability to bridge the gap between the student's self-schema and reality. Both suggestions support the premise of this research project.

Didau and Rose (2016) challenge the notion that psychology is synonymous with therapy and suggest a tendency amongst teachers to rely on intuition. Informing decisions surrounding people and situations, intuition is based upon reinforced or repeated behaviours or patterns (Alos-Ferrer, 2023). Certainly if, as Latukefu and Verenikina (2010) suggest, careful construction should be employed, it may well be pertinent to inform teachers of the importance of best practice when aligning education with actual individual needs rather than perceptions. Whilst intuitive reasoning is a source of teacher assumption and as Sipman et al. (2021:1) suggests, 'a crucial form of knowing that supports teaching', Bonabeau (2003:116) advises that 'detached from rigorous analysis, intuition is a fickle and undependable guide'.

Although the response or action of an individual is directed by prior conditioning and psychological drives, behaviourists consider these can be changed (Parkay, Anctil and Hass, 2000), since they define learning solely as the acquisition of new behaviours (Clark, 2018). Furthermore, research evidence that humans will repeat acts that lead to favourable outcomes and avoid those that are unfavourable (Shaffer, 2000; Skinner, 1972). It is these behavioural actions that were deemed by theorist John B. Watson in 1913 in his seminal lecture *Psychologist as the Behaviourist Views* as the focal point in psychology, rather than the individual's thoughts and feelings (Cherry, 2023). A dissatisfaction with the behaviourist theory instigated Neisser's cognitive approach in psychology. Deeply rooted in scientific study, the fundamental difference between the cognitive model and the behaviourist model is that the behaviourist observes the external behaviour whilst the cognitivist studies the internal behaviour (Mcleod, 2024). Empirical and experimental understandings of the

individual's psychology are linked with computational metaphor within the constructs of cognitivism (Garnham, 2019). It is perhaps worth considering merging both theories for the purpose of this study, since Markovits and Weinstein (2018) consider that although behaviourism and cognitive psychology study human behaviours with opposing models, when it comes to improving student performance both fields want the same outcomes which might be achieved by a more open dialogue and overlapping of methods in the pedagogic setting. It is further considered that research in combining the two theories in education is underdeveloped (2018) suggesting an area in need of investigation, although an emergence of successful implementation of combined theory in education is evident in the grey literature of Donohue (2020). Donohue places student individuality at the centre of driving training and believes adult learners have different needs requiring the instructor to be conversive and changeable in differing theories. He further draws correlations between behaviourism and cognitivism and considers they cumulatively create a learning theory continuum that results in a constructivist learning environment (Figure 2.):

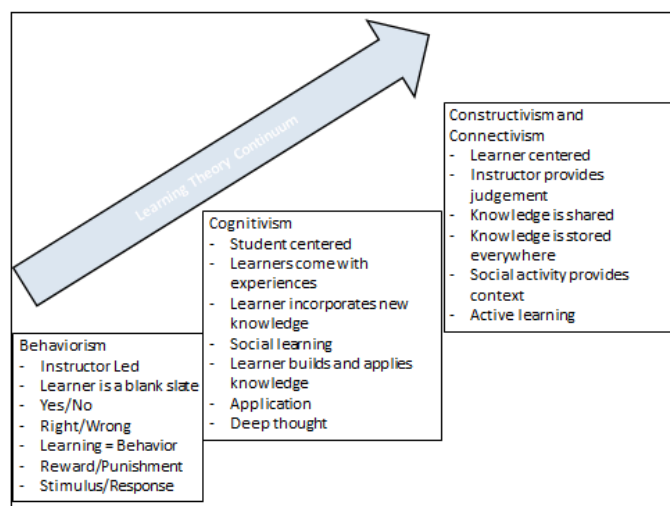


Figure 2. Connecting Behaviourist and Cognitivist Theory for a Constructivist Approach to Teaching (Donohue, 2020)

The importance of considering the student psychology from a hybrid of behaviourism, cognitivism, and constructivism may well be considered in the study of Mahone and Granvold (2005), who state that constructivism emphasises the individual's psychosocial development and acknowledges emerging changes both internally and externally to us.

Epistemic Beliefs (EB) of Teachers

A study of new teaching practice should consider the teacher's belief system. As Richardson and Bledsoe (2020) state:

Understanding the link between instructors' beliefs and their teaching practices may offer insights into factors that influence student achievement and may also lay the groundwork for attempts to encourage instructors to use effective teaching practices.
(Richardson and Bledsoe, 2020:2).

Despite Bandura (1997) suggesting that in general, people are guided more by beliefs than truths, defining truth could be deemed a grey area when considering the argument surrounding epistemic aims in teaching. Siegel and Phillips (2018) note arguments between philosophers in favour of truth, or knowledge that is understood to be truth, to be the fundamental aim of education, and academics debating critical thinking and rational belief to be at the core. How participants rationalise this may well impact the value they place upon the schema.

This project seeks to develop an understanding of teacher participants' current knowledge and viewpoint of student mindset and student psychology in singing teaching. How participants react to interview and implementation of the teaching model into their lessons may vary due to the idea that personal epistemology guides teaching behaviour and attitude (Soleimani, 2020). According to Bandura (1986) and Olafson & Shraw, (2006), personal values filter decisions and knowledge acquisition, determining teacher behaviour and epistemic beliefs (EB), dictate pedagogical outcomes. Soleimani (2020), discusses the development of theoretical frameworks in EB of teachers over the last five decades, beginning with EB pioneer William Perry (1970) and his theory of epistemic cognition which considers four main levels of intellectual development: dualism, multiplicity, relativism and commitment. Johnston (2019) succinctly describes these levels in a teaching context which will be related to the individual participant's position in the research findings:

- **Dualistic participants** consider the researcher the only legitimate source of knowledge and themselves as receivers and demonstrators of knowledge in need of highly structured teaching.
- **Multiplist participants** consider the researcher as a source of correct knowledge and themselves as learning how to learn and needing some structure.

- **Developed Multiplists** consider the researcher is seen as part of the thought process or even superfluous as the participant is entitled to their own opinion as are their peers. They prefer less structure.
- **Relativists** consider the researcher as a source of experience if they exhibit contextual good thinking. The participant will see themselves as acknowledging varying perspectives. They will welcome support from the researcher if they want to understand the 'why' and 'how' of what they are doing and not just the outcome.

The second set of interview questions will consider the above framework as relevant to possible EB of participants. Further EB studies highlighted by Soleimani include Schommer's (1990) developed framework of five dimensions in critical reaction to Perry's 'unidimensional' classification of EB:

- Certain knowledge (absolute to tentative)
- Structure of knowledge (simple to complex)
- Omniscient authority (source of knowledge)
- Quick learning (quick to gradual knowledge acquisition)
- Innate ability (fixed to changeable ability to learn)

Chan and Elliott (2004), consider Schommer's framework as flawed in its research, and suggest an approach in line with teachers' perceptions of teaching and learning and produced a categorisation of four dimensions:

- Authority/Expert Knowledge – belief that knowledge can only be learnt from an expert.
- Certainty Knowledge – can knowledge be achieved through additional work?
- Learning Effort/Process – is knowledge fixed or changeable?
- Innate/ Fixed Ability – can knowledge be constructed?

Certain similarities can be drawn between Perry's framework and the developed dimensions of Schommer (1990) and Chan and Elliott (2004), and clear comparisons are evident of these epistemic frameworks in Mindset theory (Dweck, 2016; Bernecker and Job, 2019). For example, the belief that knowledge is innate, a theory in line with fixed mindset, is constantly

debated and never determined (Britannica, 2021). Since this study is reliant in part on teacher participant's epistemology welcoming development of knowledge, a participant with a fixed mindset will unlikely embrace the research task. It seems probable that a participant with a fixed mindset would have been unlikely to agree to take part in the research. There does not appear to be any evidence to corroborate or deny this theory although one potential research participant declined to take part in this project on the basis that the project would be intrusive to their students' lessons and too difficult to take part in.

Whilst Chung (2022) suggests that research is lacking in teacher EB as being changeable, Letina (2022) compares research results with similar studies into teacher EB and confirms that it is possible to develop teacher epistemology during formal education or professional development. Furthermore, the research denotes that teachers do lean towards a belief that their knowledge acquisition is integral to the effort students invest. The interview questions that will be put to the participants will seek to substantiate these considerations.

Beyond the Research Project: Considerations of Implementing the Schema in the Wider Vocational Teaching Community

Whilst asking participants to implement a schema in their teaching practice as part of a research study has been relatively straight forward, it should be considered how the research data can be conceptualised and employed in the wider teaching community as a functioning teaching model. According to Welsh Government (2015), one of the focal aims of research in education is to improve teaching standards and make the research accessible to busy practitioners to facilitate wise decision making.

The notion that a teacher should be open to embrace continued professional development seems valid when we consider Mahmud, Moonti and Rahmat's (2019) suggestion that a teacher should master the process of understanding students; structuring and implementing learning, and actualizing student potential to fulfil pedagogic competence. Accordingly, Taniredja and Abduh (2016) further suggests the teaching and learning process should utilise an innovative method and teachers should continuously improve their pedagogical competency. The core competencies of innovative teaching are considered learning; educational; social; and technological (Zhu et al., 2013). When teachers are required not only to develop their skill set but to adapt to a new teaching model, an infrastructure should be put in place to support such implementation (University of Hull, 2024).

A thorough search of implementing small-scale schemas or teaching models such as the one in this study has proved difficult. This may be in part due to the constraints of implementing research-informed teaching as acknowledged by Brew and Mantai (2017),

despite debate that integration of research in education is critical (Hattie and Marsh, 1996). A broader search has been necessary to present large-scale implementation models to proffer ideas that may be reduced in size.

Kotter's 8-Stage Change Model (Kotter, 1996) is apparently a prolific mechanism to follow when considering implementing changes in (Pollack, 2014; Brock, Peak and Bunch, 2019; Auguste, 2013). Used across many a multitude of industries and contexts, including education, Wentworth (2018) discusses how people are inherently resistant to change and that a major determinant of successful change is the process employed for its implementation. Suggesting that Kotter's model has many advantages over similar models of its kind, Wentworth considers it simplistic, clear and communication friendly attributes, reasons for successful change in higher education.

Kotter's Model is made up of the following eight stages (Kotter 1996) (Figure 3.):



Figure 3. Kotter's 8-Stage Change Model (Kotter, 1996)

Kotter (1995) considers areas to beware of when implementing the eight steps including not establishing a great enough state of urgency, lacking a vision, or under-communicating the vision, and not anchoring the change for full implementation.

From the position of conducting a research project, the urgency is already created but considerations to how the schema might be implemented in the future would need further exploration. Whilst the first four stages of Kotter's Model seem viable for the implementation of the schema, the remaining stages might only work upon completion of the research project once the schema is proven to work, although this would need testing. This discovery has led to considering other related models of change that may fit the implementation of the schema in the context of research.

A less forceful method of instigating change is the Nudge Theory, a subtle approach that acts as a behavioural modification Tool (Thaler and Sunstein, 2008) and encompasses the following principles (Figure 4):

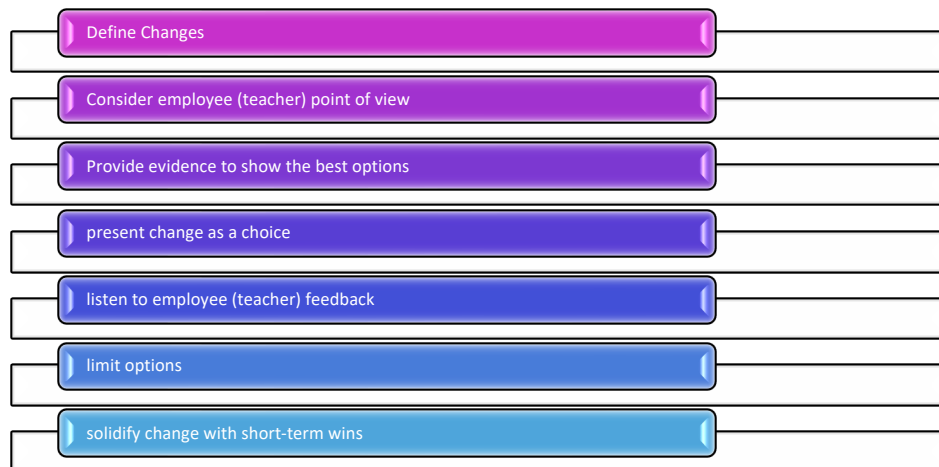


Figure 4. Nudge Theory (Tagliabue, Squatrito and Presti, 2019)

This design relies upon understanding how people think and make choices and are governed by their unconscious bias (Olmstead, 2023), which aligns with the considerations of teacher epistemology frameworks considered above. Studies in the health sector confirm nudge theory as a useful model. Arno and Thomas (2016) determine the nudge theory as useful in influencing adults to improve their dietary choices and Kwan et al. (2020) suggests the model helps adult diabetes management. Within education, Weijers, de Koning and Paas, 2021) propose that given its influence in behavioural change, nudging could be valuable in educational contexts even though current research in this area is sparse.

A less intrusive approach that is focused on the employees of a business, is the Prosci ADKAR Model (Prosci, 2024). A constructivist, person-centred approach that facilitates change at the individual level (Lucidchart, 2024), which may well be suited to the constructivist teacher professional development (Pitsoe and Maila, 2012) (Figure 5.):

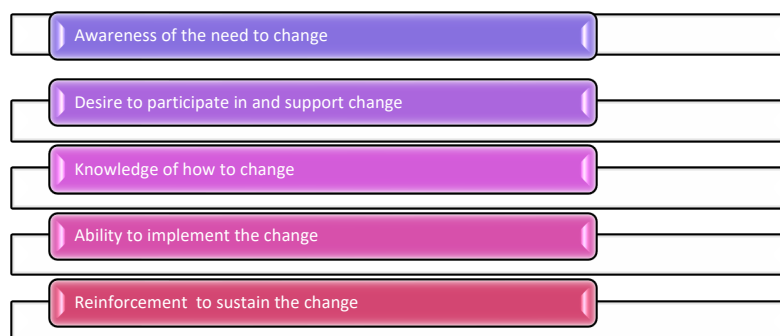


Figure 5. Prosci ADKAR Model (Prosci, 2024)

The above models have the potential to provide a rhetoric for implementing the schema for the wider teaching community but would need further consideration as to how to do this effectively. Kahn et al. (2017) considers that working with multiple implementation models with little direction require a process model such as:

- Deciding WHAT to implement
- Plan HOW and WHAT needs to be in place for it to happen
- Implementing the WHAT
- Making sure it works

There is a vast amount of theory on the complexities of implementing a model of change that are bound by the parameters of this study. To fully comprehend the best practice to implement the schema, if successful, would necessitate further research. Certainly, the schema needs to be proven as a necessary teaching model to instigate implementation.

Findings from this literature review have supported development of the schema (Appendix 2), whereby a Likert scale has been utilised for record sheet feedback in line with the research of Woods (2020) and Poe et al. (2021). Ideal for judging feelings towards particular subjects, the Likert scale is easy to understand and analyse for both researcher and participant although (Qualtrics, 2024; SmartSurvey, 2024). An issue with scaled questions as considered by Fox (2023), is a tendency for people to avoid responding with extreme responses and saying what they think you want to hear. How the schema is presented will be considered in the Methods and Methodology section.

Methods and Methodology

An interpretivist and subjective ontology guides the methodological framework of this study and considers that the individual participants perception may differ from another person's, depending on their experiential knowledge of singing teaching and social perspective (Ryan, 2018; Scotland, 2012). From this ontological standpoint, there is a likelihood that participants will reach different conclusions to the researcher (Rolfe, 2006). However, Cohen and Crabtree (2006) suggest that through discussion between researcher and participant, the expected conflicting ideas can inform a more thorough understanding of the subject matter and pave a way to re-interpretation and negotiation.

This study forms a progression from a semi-structured schema and develops knowledge acquired in module BMPF7013F. Utilising the Design Science Research Methodology (Weber, 2010), theories are built upon to enhance the original schema creation and evaluation process (Ahmed and Sundaram, 2011). Building upon the design of the schema is central to answering the research question as it acts as an experimental apparatus (Candy and Edmonds, 2010).

Development of the theories will be conducted through narrative and thematic literature reviews which serve as valuable to facilitate broad, hypothesis-generating functions (Baumeister and Leary, 1997). The theories posed, guide the direction of the practical research, and therefore need to be logically ordered (Pautasso, 2019).

The methodological plan of this project aims to perpetuate the cycle of action to prompt reflection and further development, following the action research spiral (Koshy, 2009; Kemmis & McTaggart, 2007) (Figure 6.):

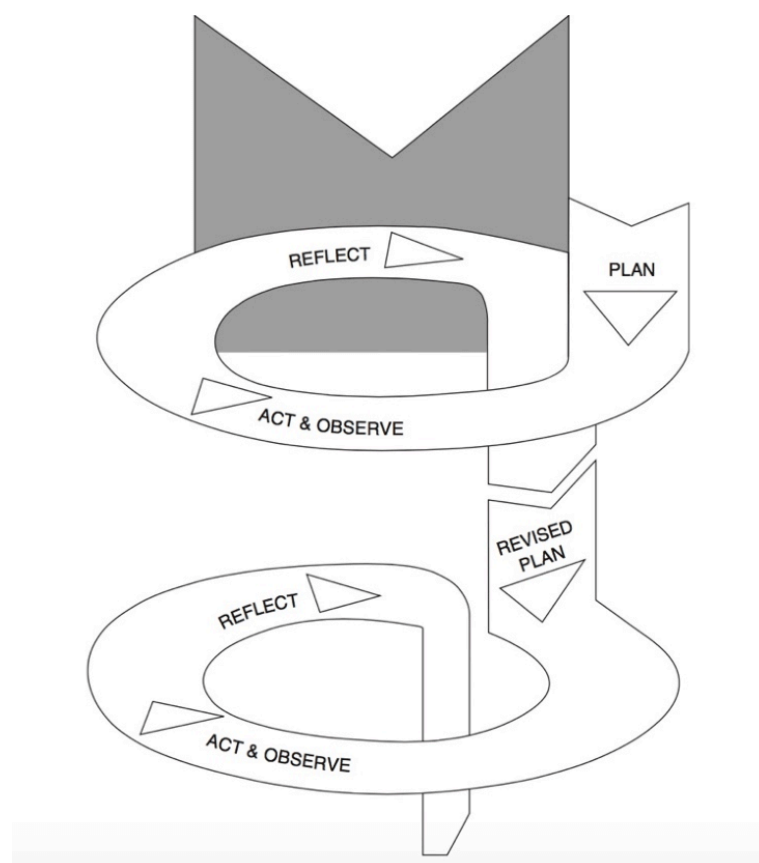


Figure 6. Action Research Spiral (Kemmis and McTaggart, 2007:278)

To inform the content of the literature review, the following flow chart (Figure 7.) has been developed based on a culmination of an action research cycle of Du Toit and Wilkinson (2010) (Appendix 6) and Elliott's action research model (Elliott, 2001) (Appendix 7).

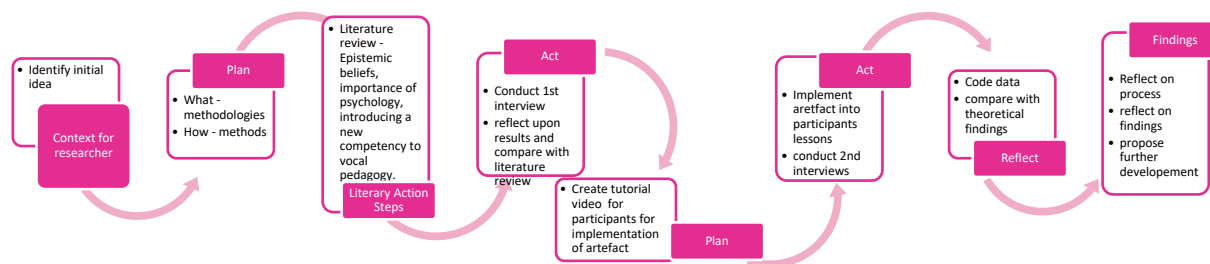


Figure 7. Flow Chart Developing Upon the Action Research Cycle (Daniels)

Adopting action research supports a postmodernist theory of knowledge (Koshy, 2009) and incorporates the constructivist learning theory and acceptance of the contextual, ever-changing knowledge of interpretivism (Perez, 2022; Kroeze, 2012). Epistemologically, this research adopts a phenomenological approach encompassing qualitative data collection from semi-structured interviews (Henriksen, Englander and Nordgaard, 2021), and the means of allowing the participant to discuss their experience of the practical research in an interview setting (Aveyard, 2011). The freedom afforded to follow new leads as they arise through such interview method (Bernard, 1988) is valuable in the qualitative researcher's concern with the process over end product (Merriam 1988; Creswell 1994). Whilst the research question seeks to be answered through the course of this study, the findings of the practical element will enable development of the schema concept and associated theories in more detail, to produce a more valuable teaching model for use in the vocal teaching community (Creswell, 1994).

Inductive reasoning will be employed in the practical research as general conclusions can be gathered through direct observations (Lokesh, 2019), supported by a procedural strategy for comparative study (Klauer, 2008). Deductive reasoning focuses on one solution (Conklin, 2023) and risks being based upon erroneous premise (Lokesh, 2019). It is anticipated that the research data will not provide one specific result due to the nature of the study and deductive reasoning is therefore discounted as a method of research. Lending itself to inductive analysis, interpretive phenomenological analysis (IPA) is cited by Noon (2018) as aligned with the systematic exploration of personal experience. Smith and Flowers (2009) suggest IPA as best suited to data collected from participants offering a detailed and rich account of their experience, a method suited to the practical research of this study.

The following process (Figure 8.) serves to contextualise the research as a whole and present a complete story (Galletta, 2013).

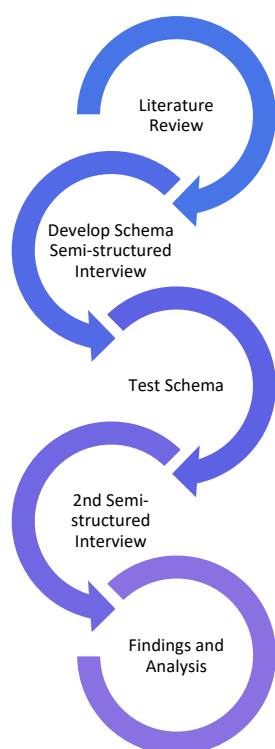


Figure 8. Conceptualising the Research Process

Developing and Implementing the Schema

The literature review will facilitate the completion of the schema ready to be trialled in the practical research. Snyder (2019) considers the literature review a relevant research method since it can address questions more easily than a single study and can inform disparate and interdisciplinary research to discover where further investigation is required. Tranfield et al. (2003) suggests that a lack of thorough, systematic literature results in vague content and flawed assumptions. Understanding these perspectives emphasises the usefulness of the literature review if conducted effectively to inform the schema.

Since the schema is constructed from theories obtained from different fields to vocal pedagogy, a process of analysis is necessary. This will investigate how well the data has transferred to the singing lesson and help to prove validation of the use of the schema on a larger scale. Implementing a self-designed model of teaching into practical research that will illicit valuable data needs support of valid frameworks.

To develop a teaching model for implementation in vocal lessons requires an understanding of the potential impact it might have on the current lesson framework. Fayaz (2021:Blog) compares creating a schema to 'trekking through an overgrown forest. Teachers are the axe wielders who navigate the new learning and create the pathways. As we provide high quality instruction, these paths become clearer'. Utilising a new schema as a teaching model therefore needs to be as straight forward as possible for the teacher. Fayaz further poses that it is important to build upon knowledge so as not to overload students with tasks. In accordance, Sweller's (1988) cognitive load theory considers the working memory only capable of holding a small amount of information at one time and efficient teaching reduces instructional methods to avoid overloading it. Evidently, the schema should be concise whilst positively impactful for both teacher and student.

The schema will be presented to the participants as a cohesive teaching model that requires careful planning. Although templates to guide the presentation of the schema have been sought, the search has yielded few results. The structure most in alignment considers the advisories of Shala (2019):

- knowing your vision
- eliminating unnecessary jargon
- making strong connections to create an unbreakable structure
- creating planners
- considering implementation (such as a handbook guide)

Participant information sheets are considered advantageous in that they provide a record of all relevant information for both participant and researcher (University of London City, 2024). The nature of this research project determines a need for instructional information and two frameworks are reviewed below to aid this design: Merrill's Principles of Instruction (Merrill, 2013) and the Revised Taxonomy of Anderson and Krathwohl (2001).

Findings in a study by Gray (2011) into the perceptions of students when using audio books or textbooks, revealed that preference for traditional text or aural media was impacted by learning style. For this reason, the schema will be delivered through an instructional YouTube video, accompanied by an e-book that can be printed off or read online (Appendix 2). The participants and their students will be required to complete forms as part of the schema. The forms, whilst providing quantitative data, are more relevant in this research to the participants being able to see actual development in their student's learning, and will provide experiential knowledge for the participant to feed back with in the interview. Understanding the participants' knowledge and epistemology prior to and after using the schema, is central to this study.

Merrill's Principles of Instruction (MPI):

Merrill suggests the MPI structure provides guidance to evaluate existing instruction and improves upon it and warns against confusing information with instruction. The schema will be a complete instruction guide for participants to ensure the research is thoroughly adhered to. The schema instruction comprising of an explanatory video and e-handbook adopts the MPI structure. MPI is considered a holistic framework of five principles (Shift Learning, 2023):

- Task-centred
- Activation
- Demonstration
- Application
- Integration

These points guide the task (or schema) to be relatable, ergo the schema must be clear and purposeful to the participant. The tutorial should bridge current knowledge of the participant with the new instruction. Visual and storytelling methods must be used in the tutorial since these utilise different regions of the brain and aid knowledge retention. Jandhyala (2017) cites the Visual Teaching Alliance as stating 90% of all information transmitted to the brain is visual and such visuals are processed 60,000 times faster than text. MPI suggests allowing participants to practice, learn, and make mistakes, as implementing the schema in their own teaching is beneficial to the schema development, as drawbacks to the design can be discovered in this way. The tutorial video is particularly pertinent in the practical implementation of the schema, since actively engaging with eLearning content to fully comprehend the information is integral to applying it to the research project (Pappas, 2017).

Revised Taxonomy (RT):

Engaging participants with a new teaching model comprising new knowledge and concepts requires a viable structure to enhance the participants' understanding. In turn, this will promote reflection and application of the newfound knowledge. This study acknowledges the Revised Taxonomy of Anderson and Krathwohl (2001) over the original 1956 version of Bloom, as the modifications from Bloom's original nouns to verbs describe learners' thinking processes rather than their behaviours. Furthermore, it incorporates knowledge and cognitive process that builds more targeted objectives (Shank, 2013):

- Creating
- Evaluating
- Analysing
- Applying
- Understanding
- Remembering

Understanding how the new schema will potentially be received by teachers is an important aspect of this study since its future use is reliant upon teacher engagement. Heiika et al. (2020) acknowledges an epistemic agency lens increases the understanding of teachers' orientation towards knowledge, and Howard et al. (2000:455) supposes a constructivist approach to 'training teachers may promote epistemological change'. Theoretical investigation into teacher epistemology forms an element of the literature review and is supported by enquiry into the participants' current thoughts and opinions surround aspects of the schema in the interviews.

Participants will be acquired through an open invitation to singing teachers of adult students on social media platforms with a recruitment poster, and by requesting UWTSD email the same request out to Vocal Pedagogy on the MA course. The benefits of utilising social media platforms such as Facebook and LinkedIn, is that they allow otherwise inaccessible participants to become aware of and take part in research studies (Bioeth, 2019) and diminishes the loss of contact with the participant throughout the research process (Jones, 2011). Whilst recruiting participants through the UWTSD Vocal Pedagogy MA presents certain issues with bias since the participants already have a vested interest in furthering their knowledge, it does provide another source from which to acquire participants. Any bias will be taken into consideration during the study.

The approach of conducting open-ended interviews that allow for discussion and eliciting participant's beliefs adheres to a phenomenological approach (Hofer, 2002). Multiple rounds of inductive and deductive coding will be used for the analyses of interview transcripts. The coding results will be presented narratively and as graphs to support the reader with the findings (Fah and Aziz, 2006). The interview data will support the findings of the literature review and will further the development of the schema to address whether the schema can be used in the wider teaching community or if additional research would be beneficial. Part of the schema requires the participants' students to complete goal attainment record sheets and participants to complete student goal engagement record sheets (Appendix 2:a). The literature review will inform the measuring system of the record sheets. The results of these

will be discussed within the semi-structured interviews and within the main body of the findings.

Mitigating Ethical and Insider Research Issues

The position and experiences of the insider researcher somewhat determines the narrative formed in qualitative research (Greene, 2014). Davies and Janostick (1991) pose that seeking ways to diminish such bias is characteristic of a reflexive researcher. Ahern (1999) supports this notion as they consider one must be reflexive to bracket, a skill that recognises bias in data collection and seeks to mitigate it by further analyses.

Conducting interviews whilst writing the literature review may help mitigate issues of strong bias by the researcher, as themes in the literature review consider varied perspectives rather than just that of the insider researcher. An adaptation to the flow chart (Figure 7, P.21) is made below (Figure 9.) to incorporate the reflective practice of bracketing suited to the research process. Oriented to a hermeneutical phenomenological method, the reflective cycle between initial interviews and literature review leads to deeply reflect on the experiences of each participant (Guillen, 2019).

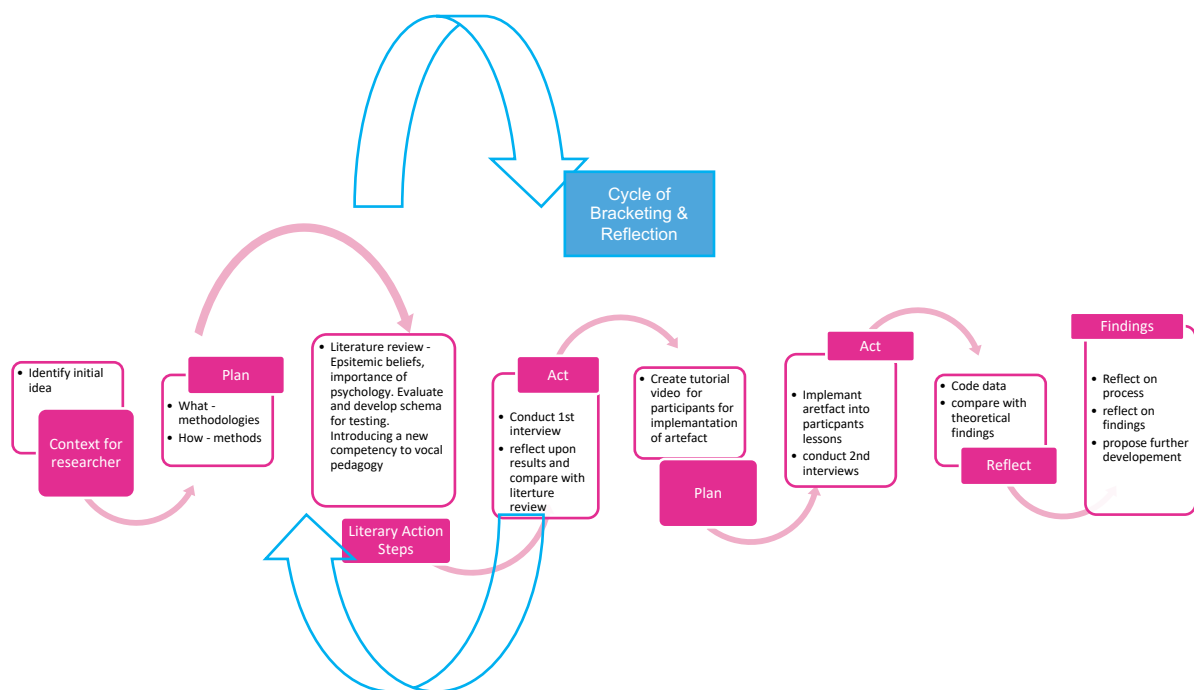


Figure 9. Developed Flow Chart to Incorporate Cycle of Bracketing & Reflection (Daniels).

Gearing (2004) considers a growing disconnection of bracketing from its origins in phenomenology and that as a method, it lacks uniformity or standards. He acknowledges that the researcher's epistemological and ontological positions influence the entire research design and that often, researchers forget to be clear about their stance which undermines correct bracketing throughout the study. There is much to be learnt about bracketing in research, and as such, this project can only hope to acknowledge it as a mode to guide certain pitfalls rather than wholly follow it systematically. A simplified diagram by Tufford and Newman (2012) (Appendix 8), draws attention to areas that might more easily be considered by a less experienced researcher in this field. Most prolifically the diagram highlights the need for constant cyclical awareness of research processes and allowing new themes to emerge.

Findings

Upon designing a research recruitment poster, social media and the Voice Study Centre Vocal Pedagogy MA students mailing list was utilised to call for potential participants. Initially eighteen vocal teachers responded although one person commented they had decided not take part as it would be intrusive to their student's lesson. A comprehensive overview of the research project was emailed out to the potential participants along with documentation meeting ethical standards. Five participants signed the consent forms to take part in the study, all of whom were unknown to the researcher at the start of the study. All participants were coincidentally female, although gender specific participation was not contrived to impact the results. De Kraker-Pauw et al. (2017) suggests research studies indicate female teachers tend towards a more supportive disposition with great expressive feedback than their male counterparts. To this end, further research into the interaction of male teachers with their students would be pertinent to gain a full understanding of epistemological change through use of the schema. Of the five participants, two were from the UK, two from America and one from Canada. All participants embraced the research project equally and participant nationality and potential cultural differences did not appear to affect the results. A separate study into singing teacher epistemology in different areas of the world would perhaps be pertinent to the study for further development but beyond the remit of this current project.

The participants were initially requested to have at least three years teaching experience in accordance with entry-level moving into proficient teaching, which might align with the

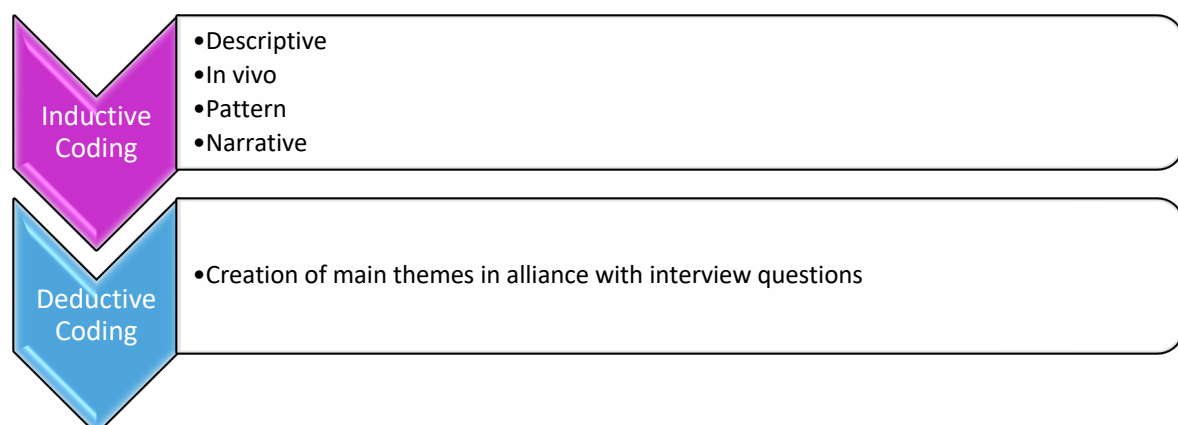
nursing band five moving into nursing band six (Lucam Consultancy, 2024). According to Huitt (2006), it generally takes between two and five years for a person to become competent in general teaching, with 50% of woman and 70% of men leaving the profession before reaching five years of service. All participants had a wealth of experience exceeding five years.

The nature of the research enquiry necessitated two interviews. The first to learn about current teacher knowledge and epistemology surrounding the importance of the consideration of student psychology, and the effect of mindset on goal attainment instruction and feedback. The second interview was designed to understand how useful the mindset and goal attainment schema was to the participants for its potential wider use in vocal pedagogy. Once data from each set of interviews was transcribed and complete, coding analysis was employed to determine similarities and differences between participants.

Coding

According to Roberts, Dowell and Nie, (2019), continued debate surrounds what can effectively be deemed reliability and rigour in qualitative coding, although Ramanadhan et al. (2021) suggest a pragmatic approach to analysis that balances inductive and deductive procedures to be a strategic method.

Data from interviews 1 and 2 was analysed employing the following deductive and inductive coding methods:



(Saldana, 2013)

The semi-structured interview questions elicited themes to form deductive coding for both sets of interviews. The questions of interview 1 (Appendix 9) were summarised as the following themes:

- Student Psychology Importance
- Mindset knowledge
- Goal Setting Utilisation and Value of Measuring Development
- Adapting Vocabulary and Feedback
- Participants' Flexibility to Developing Knowledge and Singing Studio

After an initial read through of the interview texts, many sub-themes became apparent although Braun & Clarke (2012) comment that "if you report more than six or seven themes in a 10,000-word report... your themes will likely be 'thin'..." (2012:65). Further reading into best practice coding suggests six-ten broad themes with sub-themes and no more than five codes per theme (Jones, 2023). An inductive process of descriptive coding was employed to highlight the main areas of discussion amongst the participants, generating between three and eight sub themes for each main theme (Appendix 9).

Themes were recurring due to the nature of the questions but contained similar and varied perspectives and reasonings from each participant. A second cycle of pattern coding was used to effectively determine these nuances, and to establish any commonalities between results, whilst reducing the coding themes to create a more manageable narrative for each participant (Appendix 9). The narrative is expressed as handwritten notes on the coded transcripts, derived from the direct language of the participants that summarise the individual's epistemological view, knowledge and current practice in regard to student psychology, mindset, goal setting and flexibility to new frameworks. Further analysis has been conducted to draw comparisons and contrasts between participants and summarised below. The five participants have been renamed as PA, PB, PC, PD and PE.

Participant Data – Interview 1

Quotations are abbreviated in some places with ‘...’ to remove repetitive or irrelevant wording but this does not interrupt meaning or context (University of Portsmouth, 2024).

Participant Perspective of Importance of Student Psychology

Each participant had a positive response to the importance of understanding student psychology and in vivo coding was used to summarise the main factors associated with this.

All associated adjectives and phrases are shown in Figure 10:

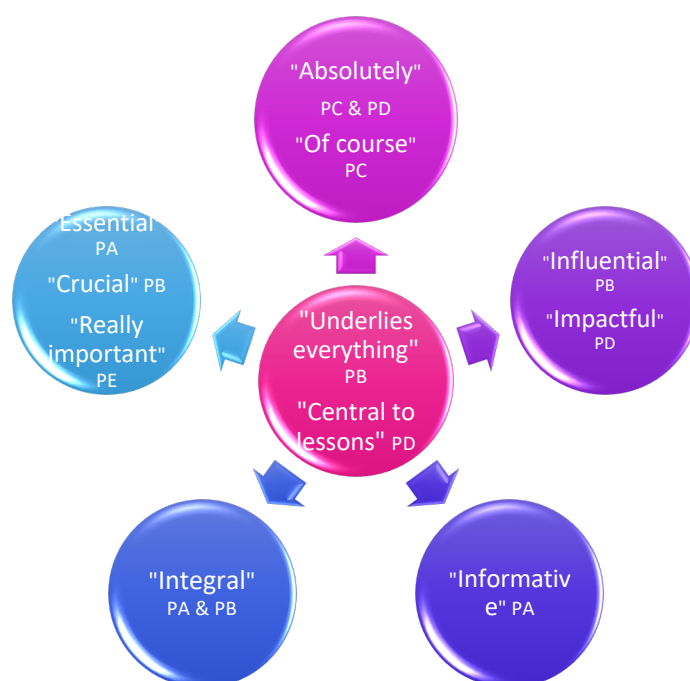


Figure 10. Participant Consideration of Student Psychology

Further pattern coding from the notes of each participant's responses have been extracted below (Figure 11.), and yield results reflective of teacher responsibility being important in their lessons. The decision to include transcript extracts in the main body of text is to guide the reader visually and systematically to understand the results (Buckley and Nerantzi, 2020; Fah and Aziz, 2006).

PA:

"help student's separate out their instrument from themselves."

"preparing students – what tools do you have to deal with rejection or mistakes?"

"I really advise people (teachers in PA music school) and I use this myself...to... really ask your students how they are, right when they walk in. Obviously, you don't have to share with me".

"I'm taking those subtle things they say or facial expressions – then I use that to **inform** what we are going to do that day.

"You **can set up the expectation** before a situation happens, like this is going to go well...that colours perception...and brings in subliminal messages to people to have that experience".

"I do a lot more **positive psychology** type things or **setting up situations** to go well".

Too much positive reinforcement right off the bat scares them".

"all I ever heard in my lessons was 'fix this, fix this, fix this...**I try to bring a lot more balance**...so they don't think everything is terrible".

PB:

"one of the **challenges is always figuring out...how they think about themselves**"

"get them to a really healthy place".

"how people feel about themselves...doesn't reflect accurately where they are in terms of ability..."what I'm doing **is trying to adjust the way they think of themselves in relation to what they are doing**"

"I do, whenever possible, **say things to reinforce how well she's doing**...progressing..."

PC:

"I make sure at the beginning of every lesson I understand. I don't tell my students I do this but **I schedule in about five minutes of catch-up so I know what's going on in their week"**.

"If there is a massive event in their life...I am cognizant of that. Sometimes that changes the repertoire of singing".

"Sometimes the reason they are in a lesson is nothing to do with wanting to learn, it's wanting a break...**so I have to ride the wave of what I am here for"**.

PD:

"There are principles that I've learned...that are incredibly useful for working with people who come in with certain issues"

"Just keeping their comfort level and mindset in mind".

"Those who come with complex issues or have bad experiences, there's a bit more focus on that".

"Just **sitting and having a chat about mindset**, not necessarily from a therapeutic place because that's not the point of the lesson".

"Chatting about the importance of mindset...seem to often shift how they think about it...and give people a sense of autonomy".

"I might suggest...you could come for an RTT session...I won't force it because some people aren't receptive to it."

PE:

"adults who are beginners can be a little bit more tentative...self-effacing"

"They can be 'I don't really have time for this...I need to focus on my work or my family'".

"They have ways to be a little avoidant about practice and be a little defensive towards themselves".

"Student psychology and performer psychology comes up the most...in the regard of people identifying with their struggles or...challenges"

“I will kind of unravel that...it’s about an experience rather than about I’m this way”.

“That’s part of their process and without those little failures or missteps or challenges, there can’t be any progress made.”

Figure 11. Pattern Coding Showing Results of Importance of Teacher Responsibility.

The yellow coded comments are initial considerations of the teacher’s role: Which suggest understanding why the student is there, helping and preparing the student, with the necessary tools to get them to a healthy place whilst recognising that without challenges, no progress can be made.

The green comments suggest a balanced approach to positive reinforcement and understanding, discussing, and unravelling the challenges and complexities that each student comes with.

Purple comments are reflective of the student’s self-schema, the teacher’s need to understand it and their role in separating the student self from their voice. Figure 12. Shows the responsibilities considered by the participants:

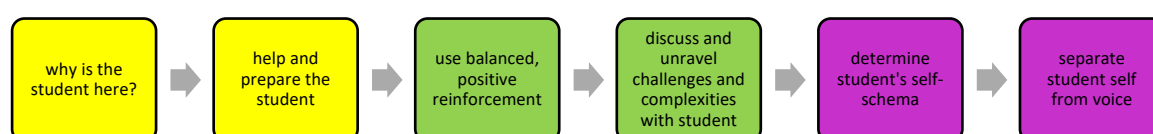


Figure 12. Flow Chart: Teacher Responsibility in the Vocal Lesson

Titze (2022:53) premises his thoughts on mindset in singing with the suggestion that ‘the most successful vocalist is probably the one who can mentally separate himself from the instrument’. A notion that supports a recommendation that teachers address this aspect in the vocal lesson.

Experiential knowledge of being a student has led to an empathic stance in consideration of the teacher’s role in understanding student psychology:

“Drawing on past experiences of my own, of how I wish teachers had been with me...I had gotten into this really bad place because all I heard was what I was doing wrong”. PA

“I had a teacher who was all well-meaning but crushing...I treat them how I like to be treated and bypass some of the ‘wow, that was amazing’.” PB

"I had one teacher who was absolutely fantastic at removing from any negative place and distracting me essentially. She used a variety of techniques to do that, and I have expanded on that." PC

"I went through a traumatic event...I suddenly found myself unable to sing...it was only the psychological intervention that helped from somebody who was a specialist in this and was a singing teacher...and then the teacher I went back to again really emphasised mindset stuff...it really impacted me in a positive way...it is central to a lot of my lessons." PD

PE did not directly comment on own experiences but had a significant experience of dealing with psychology *"I am fairly well versed in a lot more psychological methodologies and perspectives...my partner is also a therapist, so it's something that's a little bit in my world."*

The considerations above align with preliminary research in module BMPF7013F for the creation of the schema and are congruent with Fletcher and Krause's (2023) research, which concludes experiential, empathic and leadership skills to be positively and statistically associated with the voice teacher's influence on student achievement. PA's consideration of separating the voice from the person is echoed in the sentiment that "voice teachers have to encourage students to communicate safely and collaboratively about their bodies and their largely visible instrument" (2023, p.451). A heavy emphasis on the virtue of employing positive feedback runs through the report of Fletcher and Krause (2023), with no suggestion of a balanced approach which misaligns with PA suggestion of a balanced approach and the research of module BMPF7013F pertaining to adjusting vocabulary in feedback depending on student mindset. The term mindset is not mentioned in the study and presumably not considered.

Mindset Knowledge

PA seemed less certain on mindset definition commenting *"Fixed mindset is going in and feeling you know everything"* but as the interview progressed, PA alluded to fixed mindset as something that could be developed to learn more and more synonymous with its actual definition. PA blames lack of creativity for diminished growth mindset since *"if they are really creative, they make inferences more easily"*.

Since PA grew up in an environment with parents who were *"psychologists and also neurodivergent"*, they feel they were raised with a *"fixed mindset"* and as such have spent their *"adult life, for probably almost 20 years now...working on developing the growth mindset within myself and helping my students head there"*.

PB suggested mindset to be *“someone who doesn’t think they can do it” and somebody who believes “I can do anything” or “any of the million levels in between”*. PB referenced that *“since Covid, my students are having more mental health issues”* so now considers their mindset on the day; *“how they walk in the room”*. PB discussed use of mindfulness techniques in lessons due to student anxiety and depression rather than actual mindset stating, *“I’m looking forward to hearing your program because I have no program, I have no plan about to deal with things, but it’s certainly something I notice”*. Like PA, PB was less certain of fixed mindset, but had a clearer understanding of growth mindset.

PC stated they had *“never thought about it”*. They suggested mindset to be summed up with terms *“creative mindsets and corporate mindsets”*. This distinction is due to the psychoanalysts who *“are not there to learn singing”* rather *“constantly evaluating”* and *“will not do anything creative, imaginative”* and *“only want the anatomy and very precise instructions...trying to get anything musical out of them is really difficult and I have to be subversive to that. I have to pretend it is a scientific model as opposed to expressing any feelings... so there is an openness and closeness”*. PC was not clear on the definition of fixed mindset; *“somebody who believes that their prescribed way of behaving is the correct way”*, but accurate with growth mindset; *“somebody who has enough self-efficacy that they want to continue to learn and expand”*. After listening to the explanation about the fixed and growth mindsets, PC considered they *“know innately...what they’re (the student) prepared to do”*, and queried *“you could probably be growth and fixed at any point couldn’t you?”*. PC recognised themselves as feeling like they had a *“growth mindset...about a whole range of things... except sport!”*. PC also identified that *“people say what you want to hear”*, particularly from the stance as a singing student where they *“make excuses”* and want to be perceived as trying even if they are not.

PD suggested mindset as being *“to do with the way you talk to yourself... and the way that influences the way that you see the world, see challenges, see learning”*. Having already intimated a good understanding of mindset in the first section of the interview, they explored the idea that *“everybody falls into a fixed mindset at times, even if they do have a growth mindset usually”*. PD also considered *“it links to autonomy”* and that *“if people understand...their mindset can be changed, that can have a positive impact on their learning”*. Although PD felt they are *“probably”* intuitive about their students, they suggested that *“there are some students (you) really have to read”*. Furthermore, the student may seem *“quite closed off...which makes you think, oh, they’ve probably got a fixed mindset but at the same time you don’t actually know...so it would be helpful to know”*. PD does listen to student’s *“words and language that kinds of gives it away a bit”*.

PE's feeling that mindset is *"synonymous with orientation"* gave way to consideration that the mindset can be changeable within singing, not just with different subject matters as explored in previous interviews: *"Whether it's your mindset toward practice...performance or...collaboration"*. PE described what mindset was correctly and compared it with *"acceptance and commitment therapy"*, which *"because of my own experiences with that in a therapeutic environment and feeling a lot of growth in my own practice... I've started to bring some of those practices into my teaching as well"*. PE succinctly described the cross over with fixed and growth mindsets as *"fusion with thoughts and the opposite of that being diffusion and psychological flexibility...where we don't have to make all the perfect choice right away...ACT is very much interwoven with that same concept (fixed and growth mindsets)"*.

As PD had expressed, PE felt teaching singing technique shouldn't be confused a coaching environment but *"some of the offerings I put forward will be influenced by that"*. PE intimated a good teacher would know a student's mindset: *"If I'm teaching well, then it is unavoidable that I'll come across their mindset, right? If I was teaching and was not aware...then I haven't really done my entire job"*.

Since the participants have in most part, no firm knowledge of their students, the comments made correspond with Kagan's (1992) suggestion that teacher belief is, in part, defined as unconsciously holding assumptions about students. The schema design could, if effective, offer more certainty to the participant in their teaching.

Goal Setting Utilisation and Value of Measuring Development

All participants except PB confirmed that they currently set goals, although PB confirmed that their current research *"makes it very clear that it is extremely helpful and important"* and *"my reading is telling me it helps motivate them"*.

Participants' current methods of measuring goal attainment appeared unstructured with:

- PA not using *"any fixed form of measurement"*, but rather kept it *"all in my head"*.
- PB only measuring *"range"* to reinforce how the voice has developed by gaining more notes.
- PC only measuring development by verbally reminding the student *"where they were"* and *"can you remember you couldn't do this?"*

- PD encouraging *“students who are comfortable with this... to record themselves...so they can look back and see progress.”* PD acknowledges you need to *“hear, see and feel, which are hard to measure; I could do with better ways of measuring it”*.
- PE *“keeps copious...handwritten notes”* to aid forward development in the next lesson. Measurements are only employed if *“I feel it will be motivating for them. I never want to be the one holding the yardstick”*. If the student is struggling with motivation, PE suggests taking a *“practice video once a week...and we’ll start the lesson by looking at the practice video and checking out what happened and what didn’t happen and where do we want to go from there.”*

Informal assessment, as Abrahams (2010:277) states, can be ‘vague and fleeting’ and more specific feedback and measurement would aid specificity. The schema model is contrived in part to take ‘remembering out of the head’ Wagoner (2013:1), a concept that suits the indeterminate method of goal tracking that is apparent from the participant comments.

The consensus of PA, PB, PC and PD was goal setting and development tracking would be useful but with provisos. PE did not offer an opinion (Figure 13.):

PA - Yes

- in a “school setting” due to the “subjectivity” of teacher’s opinion over fact (not relevant to adult students)
- for “certain personalities” dependent on their learning method

PB – Yes because:

- currently “feeling the lack”.
- “want a method for setting goals, and then measuring them and showing (to the student).”
- most beneficial to the student “because ‘I’ hear and see the growth”.
- the “student is much more empowered to continue moving forward”.
- “My reading is telling me it helps motivate them”.

PC – Yes

- “If it is easy...If it is time saving and “within the lesson.”

PD –

- “Yes, because although exams are great I feel they handcuff people a little...you’ve got to hit the criterion...it’s not always necessarily what the student needs to work on”.

PE – No definite answer

- The student is “in charge of documenting and assessing their own progress”.

Figure 13. Utility of Goal Setting and Development Tracking

Adapting Vocabulary and Feedback

Pattern coding revealed that participants change how they feedback to students using three descriptors derived from the transcripts (Figure 14.):

1. Student's ability
2. Student's schema
3. Student's preferred language, including analogies and visual

The coding provides evidence that participants already consider how they instruct and feedback to their students in multiple ways and it is predicted this will not be alter greatly after testing the schema.

PA changes vocabulary to suit:

- "college students" requiring more "technical terminology"
- students "that aren't in a university setting", requiring less explanation so that they won't "overthink it"
- "reading the room...reading how the person is that day".
- a "wide range of developments...range of student types"

PB:

- "language issues...for international students...or someone not as well read".
- "how much science I give them" dependent on level of student.
- If someone "is anxious" or has "a bad self-image".
- "this didn't work – but you can fix it" rather than being overly positive, based on experiential knowledge of being a student.

PC:

- People who "love it when I use Italian terminology because they feel fancy".
- "If people prefer colours then I do colours. If people prefer shapes, shapes".
- "I borrow their language" - "Somebody said 'lemony' recently for a head voice sound". Somebody else said innocent, and they didn't sound innocent...but I write it down and when I say innocent they do it correctly". "I get them to come up with it themselves".

PD:

- Those who are "sensitive to language and will take the negative out of anything you say".
- Those who say "they want feedback, then just get upset about it".
- "prefaces" comments with "'this isn't a reflection on you and your singing, it's just a reflection on an actual thing that we're just working on'...and kind of separating it from them.

PE:

- "Match where I perceive them (the student) to be".
- Use "mental pictures or visual cues".
- "Match their language preferences".

Figure 14. Pattern Coding Showing Participant Change in Feedback to Students

Flexibility to Developing Knowledge and their Singing Studio

The results of this section are perhaps biased due to each of the participants being a former or current student on the MA in Vocal Pedagogy course at UWTSD. When participants were asked if they were open to new teaching frameworks that were proven to work or, developing their psychology knowledge, they all exhibited a desire to further their knowledge, but it must be considered that this is a biased opinion and one not reflective of a non-Masters singing teacher. Unfortunately, other prospective participants who were not on a similar program chose not to take part, this may be reflective of their position of not wanting to develop their knowledge although that opinion is pure conjecture. The main themes to arise from pattern coding (Figure 15.) were:

Student centered: Considering student's schema and needs

Teacher benefit: knowing the lesson is structured well and utilising valuable methods

Desire to keep learning and developing the practice

PA:

- being interested "in learning about new things in general".
- wanting "more tools in my toolbox" because this "makes it easier for you to connect with a wider variety of people."
- experiential knowledge as a student of "excellent technical teachers" who do not consider the student psychology.

PB:

- "Understanding my student's psychology is very important to my teaching...it underlies everything that I do".
- "There's just always so much more to learn".

PC:

- It's lonely being a teacher and "you don't know if you are doing the right thing."
- Developing knowledge around student psychology being "vital".
- "Our responsibility is enormous...I'm a really important break in their week...give them self-confidence in their whole lives and I feel that pressure massively".

PD:

- "I think it's really useful to keep developing and never be fixed".
- "It's central...first of all, it really interests me, second of all, I've had personal experience, and I've seen the impact that kind of understanding can have on students".
- "It's an area that interests me...obviously I've had the therapeutic training, so the waters get a bit muddy. I try and keep them separate because of ethics...but I've had some interesting conversations with other voice practitioners who have specialisms in in things like physical rehabilitation, and massage and I've started to understand that some of this can come into the lesson a little bit more.

PE:

- "I do it all the time!".
- "I expand my offerings to include more...coaching orientated stuff, more performance coaching

and creativity nurturing."

- "it's all about just reaching somebody better...it's going to be a better lesson for them, and it's going to be less draining for me."
- "Anything that will make that exchange more open...more constructive and more flexible"

Figure 15. Pattern Coding Shows Flexibility in Developing Participant knowledge and Singing Studio

Implementing the Schema – Interview 2

PA, PB, PD and PE agreed the schema was straight forward to use and described this using the following words (Figure 16.):

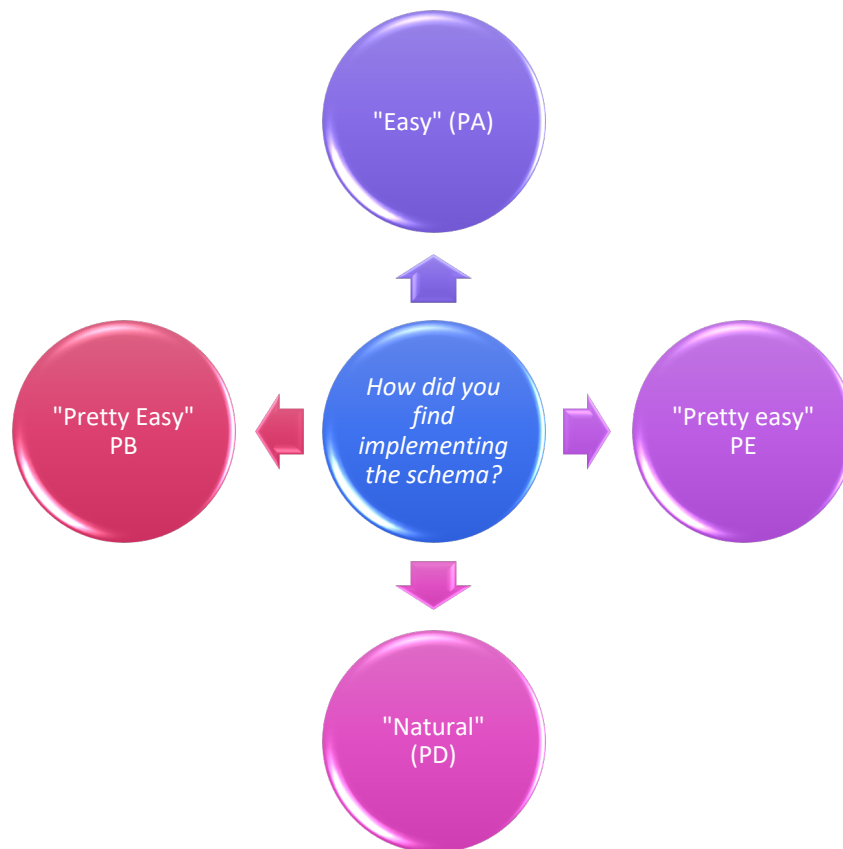


Figure 16. Descriptions of how Implementing the Schema was Considered by Participants

PC considered it “*dependent on the student*”, an answer due, in part, to the fact that they had implemented the schema into the lessons of three different students so were able to compare and experience more challenges than participants who had only enlisted one student into the research. This might impact the findings, since each participant should have experienced testing with the same number of students for more balanced results. Due to sickness and Christmas concerts, it was difficult to impose and would have resulted in

participants potentially dropping out of the study. Nonetheless, the schema was successfully utilised by each participant, a result which cannot be disregarded.

Impact of the schema

Each participant was positive in their response that they had learnt about mindset from the schema and would implement the schema or elements of it going forward (Figure 17.):

Participant	Did it enhance knowledge of mindset?	Would you use any of the schema in your teaching going forward?
PA	Yes	Yes
PB	Yes, somewhat	Yes, I would consider it
PC	Yes	Yes, but it's subjective
PD	Yes, in the sense of measuring	Yes, I want to use it more
PE	It connected the idea of mindset with goal setting	In some form, for some students

Figure 17. Impact of the Schema on Participants

Reading through the transcripts to understand the areas that were helpful or challenging to each participant, presented discrepancies in opinion as they change their minds. An example was PA initially stating *"I don't know if I need to measure how much their mindset is growing"* which was then changed. Hope and Francis (2017) considers that inconsistencies are due to brain retention and how it recalls experiences are important. A narrative approach to coding the transcripts shows PA faltering on their second response that changed:

"I'm thinking about it more too. Well, I guess, I guess, I guess if you can't tell what their mindset is like right of the bat, you know, some people walk in, and they say or do things that you can kind of tell like right away. If it's ambiguous with a new student, then it would be helpful to do the profile".

Magnitude coding of positive comments about the schema was conducted throughout each set of interview transcripts. The comments were numerous and therefore not re written out but can be found in Appendix 10. The positive comments were numbered and highlighted in the transcript and categorised into the following themes with corresponding highlighted colours (Figure 18.):

Positive

Benefit to teacher

Affirmed current practices

Matched or better than expectation

Student reaction

Likely to use in voice studio going forward

Likely to implement in other instrument/music lessons

The graph shows the number of responses for each of the themes (Figure 18.):

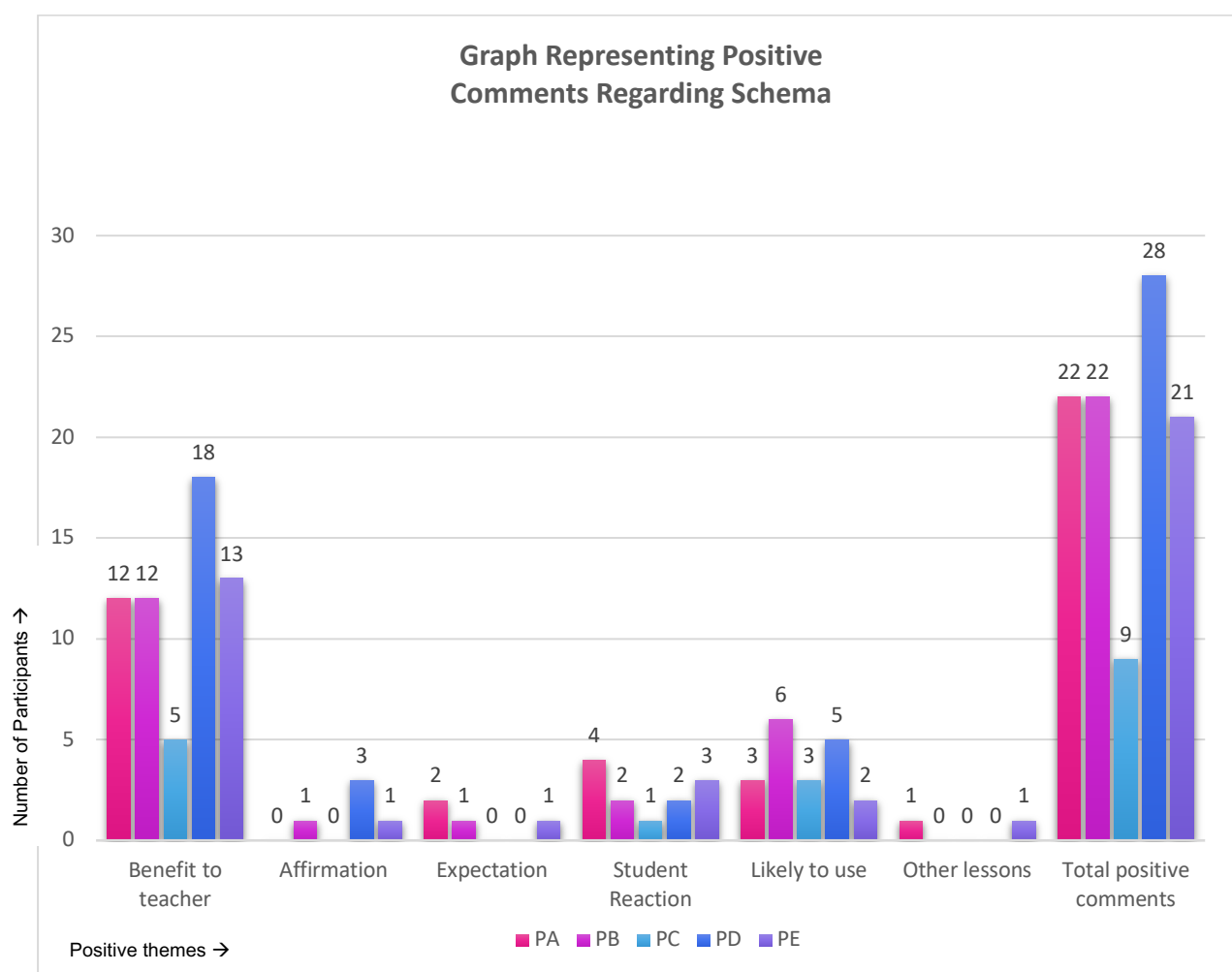


Figure 18. Magnitude Coding Results Graph of Positive Comments Regarding the Schema

PA, PB and PE exhibited similar positivity towards the schema, whilst PC's and PD's results, 9 and 28 respectively, stand at opposite ends of the spectrum. The schema would benefit from understanding the results of PC and PD and the dichotomy of their opinions, particularly given they would both be likely to use the schema or elements of the schema in their teaching practice. PC did originally state that they would use the schema going forward, but it was "subjective", and a read of the interview transcript suggests a strong feeling the schema is "student dependent" which may be reflected in the results. Whilst word and

phrase repetition were not being analysed in the data due to an apparent lack, PD's transcript demonstrated an overarching theme of why they may be more positive towards the schema, since they utilised the words "structure" and "structured" cumulatively six times to reiterate how it helped their teaching. PC is viewing the schema from student perspective whereas PD is concentrating more on how the teaching model itself is enhanced.

Negative Comments

Hsiung (2010) considers negativity to be useful in strengthening qualitative research if the negative response can be explained. Transcripts yielded less negative feedback than positive, although magnitude coding of the main themes suggests student engagement with the schema to be the most prolific issue:

1. Teacher issues relating to:

- how to implement the schema with current students if not as part of research.
- Learning a new model to implement whilst already busy.
- Concern that there is more to student psychology than covered.

2. Student reluctance to engage due to self-schema, ability and administration skills.

3. Unreliable results from students and how to ensure they clearly reflect their thoughts.

A comparative graph (Figure 19.) suggests the schema to be more positively than negatively impactful to use in vocal lessons:

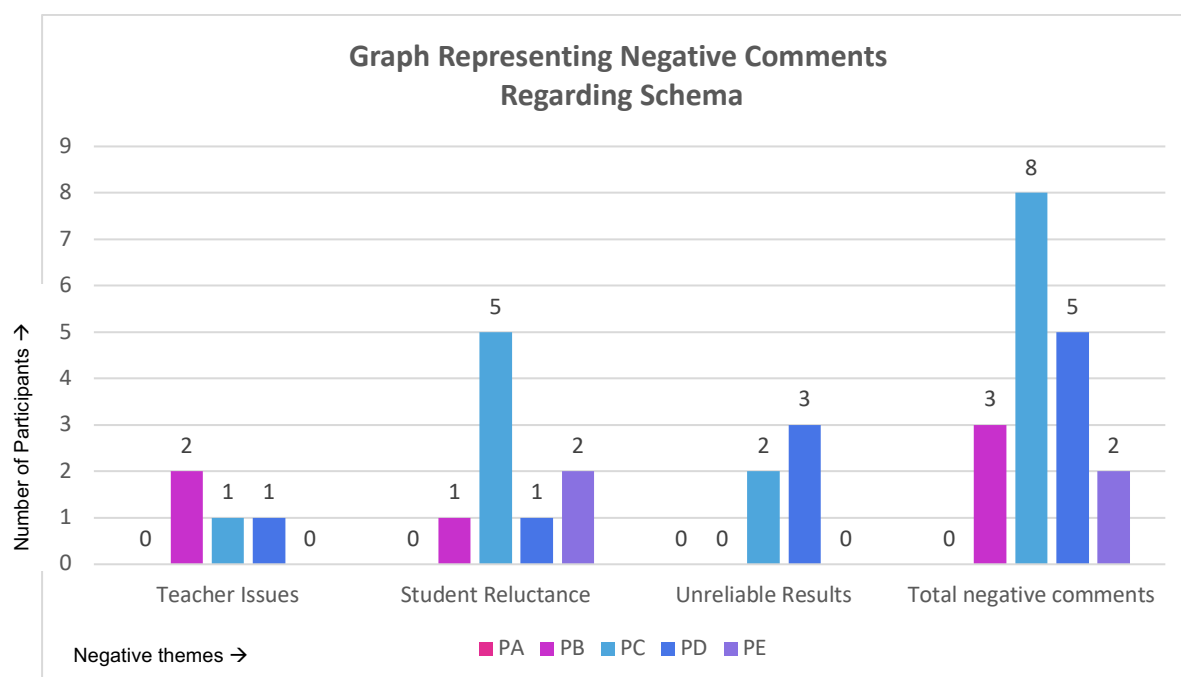


Figure 19. Magnitude Coding Results Graph of Negative Comments Regarding the Schema

The decision to present the negative and positive comments as quantitative graphs in a qualitative study was taken as they provide transparency of the analytical process and create clear visuals of data that may otherwise be missed (Pokorny et al. 2018; Tierney, 2012). Comparatively, the graphs of Figures 18. and 19. suggest a far more positive association with the schema than negative since the negative comments amass eighteen and the positive comments total one hundred and two (102).

A reflection of the forms filled in by the participants' students (Appendix 12), goes some way to explaining the results of negative comments. The table below (Table 1.) shows each of the profile sheet scores, student goal engagement scores awarded by the teacher, and student reflection scores given by the student with how much the score improved alongside.

PC experienced the most negative experience, and Table 1. shows some improvement but static movement, a small decline and a student even electing to not take part. PD had the second most negative comments and like PC, had engaged three students in the research. PD experienced much better development over the course of the three weeks although like PC, had a student with a 'fixed with some growth' mindset although this did not deter the student from continuing as it had done for PC's student.

PA had a good experience with no negative comments, which is reflected in the table, and in the majority for positive comments.

PB had lower negative comments and in the majority for positive comments although the scores were static, but the student was of a growth mindset and vast improvement was unlikely.

PE was a little more negative but sat with the majority for positive comments and like PB, their student was of a growth mindset.

In module BMPF7013F, Burgoyne and Macnamara (2021) were referenced as suggesting the original Mindset Profiling tool of Dweck (2016) to be flawed due to the need for cognition and goal orientation over mindset, and perhaps this is in some part proven, given the difficulty in finding correlations to be found between mindset and goal engagement and reflection in the table below (Table 1.). The scores are derived from the Likert Scale used on the record sheets:

Participant	Student Mindset	Student Goal Engagement scores over 3 weeks	Improvement Yes/Static/Decline	Student Reflection scores over 3 weeks	Improvement Yes/Static/Decline
PA:1	33	13 12 15	Yes +2	16 19 20	Yes +4
PB:1	37	14 15 14	Static	16 15 15	Decline -1
PC:3	31	11 10 15	Yes +4	19 19 19	Static
PC:2	29	15 15 14	Decline -1	15 17 16	Yes +1
PC:1	24	N/A	N/A	N/A	N/A
PD:3	33	15 15 15	Static	14 19 19	Yes +5
PD:1	22	7 8 9	Yes +2	12 14 14	Yes +2
PD:2	25	14 12 15	Yes +1	13 16 19	Yes +6
PE:1	36	15 15 15	Static	17 17 ill	Static

Mindsets:

10-15 = Fixed

16-24 = Fixed with some Growth

25-34 = Growth with some Fixed

35-40 = Growth

Table 1. Student Mindset and Improvement/Decline of Goal Engagement Reflection

The below graph expresses the data in a visual format (Figure 20.). PA, PB and PE tested with one student each, whilst PC and PD approached the test with three students. The mindsets of each student have been ordered from lowest to highest to evaluate if the student engagement and student reflection follows the same trend. No correlation can be obviously seen between the mindset of the student and their improvement of scores on goal engagement and student reflection, but there does appear to be evidence suggesting student engagement is not in line with student reflection, suggesting the teacher and student have opposing perspectives towards the student's development. Perhaps this supports Yu and McLellan's (2020) theory in the literature review, that further research into the integration of the individual motivational beliefs and goals of students is needed.

Regardless of differing perspectives, it should be noted that the top three students with the highest growth mindset have remained static in student engagement results. Such outcome suggests that the test has not been detrimental to the student. Apart from an anomaly with PC:2 declining and PC:1 retiring from the test altogether, all students have shown some degree of progress with their goal reflection and engagement. It cannot be attributed to PC:1 having a fixed mindset of 24 as the sole reason for their departure, since PD:1 had a lower

mindset of 22 and developed in both areas by 2 points in each case. Early signs in testing do suggest that the schema affects student reflection and engagement for those of a mindset of 33 and lower. Further research into how goal setting can best impact the higher growth mindset should be considered, although it could be debated that the students may have falsified the mindset profiling results initially. Researching with a larger group of students would be beneficial in identifying the variables of the results and understand the trends more clearly.

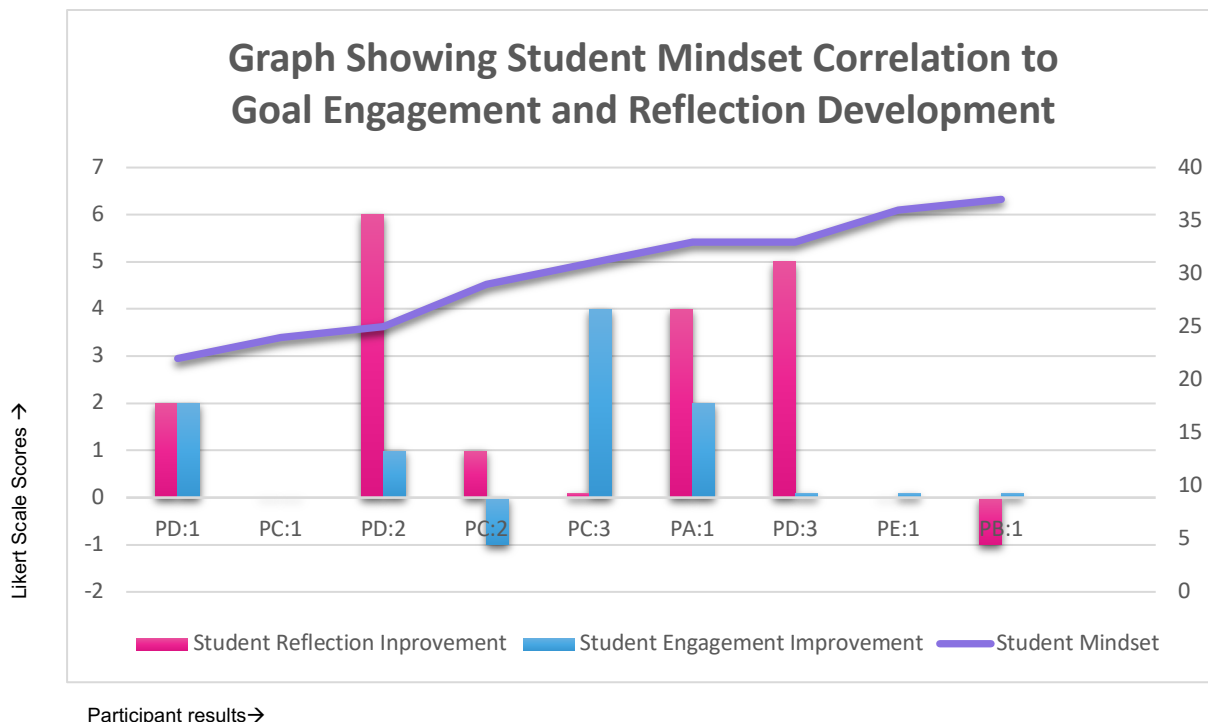


Figure 20. Student Mindset Correlation to Goal Engagement and Reflection Development

Tesch (1990) defines comparison as the most significant way to discern conceptual similarities and discover patterns, a design according to Turner (2022) as rooted in although not restricted to grounded theory. Glaser (1965) defines the analysis process as constant comparison that frequently generates challenges to the definition of a code, inviting a process of reflection and comparison with other data.

Participant Understanding of Competencies

The literature review sought to explore the importance of pedagogic competency due to its relationship with innovative teaching methods and continued professional development. There is perhaps symbiosis between the schema, and the innovation and teaching development which was considered in the second interview. Each participant was asked not only what teaching competency was but also what vocal competency meant to them as a

means to understand teacher epistemology surrounding teacher knowledge and development. Pattern coding yielded similar themes to the 'Participant's Flexibility to Developing Knowledge and their Singing Studio' (p.42), in that all participants acknowledged a need to understand and develop their skills to be fulfilling teacher competencies:

Student centered: each student is individual and at the heart of learning.

Teacher responsibility: continued development and know what you need to know.

Understanding voice mechanism

PA gave a succinct reply that vocal competency "means that you are empowered and are learning about yourself so that you can take charge and know what you are supposed to be doing. They suggested teacher competency is how effectively you can portray your ideas and work with students to their success."

PB supplied a more elaborate response that could be summarised as:

"Understanding of the mechanisms is important for the teacher."

"The teachers that I think are the best are the people who really tune into what is going on with the individual."

"You have to pay attention to where they are, to their mindset, what they're bringing into the room that day, because that will change. Then you have to do what they need that day to move them forward. That requires an understanding and an instinct of psychology and an understanding about how the whole mechanism work so that you know what to focus on."

PC, similarly to PB, considered it to be "the ability to adapt to your individual", and the need to "have a basic understanding of the voice and anatomy". PC added "a huge part of being a good teacher is always putting what your student wants first". They further posed it was "not to get lazy" and "staying on top of all the new research."

PD cited "communication" as important. "Your main job is to communicate and help that other person communicate." PD also felt motivation was a strong competency; "being able to be in the moment and be passionate, both of these things help with motivation for the student." PDs empathetic knowledge guided them to want to "continuously better yourself...continuous development for the purposes of yourself and your student". Since their teachers had been rigid in their approach in line with how they had been taught.

PE suggested competency means "being able to know how to find resources." They also felt it important to be "humble" and be able to say "oh I actually don't know about that but here's a place where you can learn that...I feel like competency is very embroiled with knowing with knowing what you don't know, knowing what you can teach well and what you can't."

Figure 21. Pattern Coding Shows Participant's Understanding of Competencies

Suggestions for Schema Development from Participants:

This study not only investigates a new schema and its potential utilisation in the vocal studio but is designed to determine what further action should be taken in its development, information that is derived from the practical research of the participants. To this end, each participant was asked if they had considered the schema lacked any information or had any suggestions for further development:

PA felt more “*prompt*” questions would be useful to help the student complete the weekly student reflection record. They suggested drawing out more comments from the student by adding an example: “*why do you feel you couldn’t complete it (the goal)? What happened in life? What about the goal that we set? Do you not have enough time? Do you not have the desire? Is it boring? Do need to make new goals this week? Or is it the same goal but you just need to apply this formula? Maybe if this was a longer protocol, like giving teachers some questions on the sheet that prompts what type of changes they need to make for the next week to get successful results.*”

PC made a similar comment suggesting: “*My results are basically three different types of people...I wonder if you could modify language a little bit for the student reflection record or give some pointers (for each type of person).*”

PE similarly felt more was needed on the student reflection record: “*I would have wanted some more questions...I feel like the wording in questions three and four are a little confusing...does that mean the beginning of this practice week or does this mean the beginning of the goal. It might be interesting to be a little bit more specific, like, ‘I feel better about’, or ‘this goal feels more attainable’. I feel the wording in that was a little bit vague.*”

PE reiterated PA’s position that they would like “*meatier prompts, so that they have a little bit more to respond to...I think it would be nice to have some questions that allow the student to be drawn out a little bit*”. Similarly to PA, PE gave example questions; “*how did you feel about your practice this week? Was it frustrating? Was it hard to get started? Was it fun? Did you like the result? Did you enjoy it?...just to have some qualitative aspect.*” PE made an additional suggestion that the profiling tool could be further developed for various aspects of singing and music studying and “*even have some open-ended questions like ‘what’s one thing that you feel like you could accomplish’.*” PE added: “*it’s not part of the profile...it might be interesting to have some open-ended questions to check out if there are limitations to their growth mindset or even exceptions to the fixed mindset.*”

These responses suggest inclusion of more enhanced qualitative discussion which serves as fruitful, considered information on which to base further schema development.

Discussion

As addressed in the literature review (p.12), the epistemic beliefs of the teachers were conducive to the research project and aligned with Perry's (1970) 'multiplist' and 'developed multiplist' participants in the theory of epistemic cognition. The structure that the schema offered was highly valued and each participant considered its use worthy in their lessons going forward (multiplist), although the ease of implementation into the lessons and suggestions for schema development suggests less input from the researcher might be required now (developed-multiplist). It would remain to be seen if this cognition developed further upon presentation of a completed model of teaching following further research. Undertaking the research task, learning from it, and offering ideas to enhance it further suggests the participants (and teachers of a similar calibre), can acquire certain and expert knowledge that is changeable and achieved through additional work, in accordance with Chan and Elliott (2004). As considered in the literature review, the teachers did not exhibit a fixed approach to the research task.

Pre-Schema Implementation

The coding implied that not only did the participants hold the belief that student psychology was an important consideration in the one-to-one singing lesson as discussed in the literature review (Hoy, 2010; Felder and Brent, 2005; Latukefu and Verenikina, 2010), but they felt responsible for separating the student from their voice for the sake of their self-schema as posed by (Titze, 2022). Whilst teachers with experiential knowledge in vocal training of a minimum of three years were required to participate, the data showed that the participants reflected upon their experiential knowledge as a student to inform empathic teaching in their practices.

Mindset knowledge was in some part vague amongst participants, indicating a potential need to educate singing teachers about the potential impact. Even PC, who had experience of psychoanalysis claimed not to have considered mindset in teaching before. In accordance with the consideration of a Likert scale being biased to people saying what you want to hear (Fox, 2023) it was felt that this potentially filtrated into mindset profiling by PC. This biased theme became more prolific throughout the study as participants intuited some students were not truthful in their profile record sheet responses.

All participants agreed that goal setting was appropriate to the lesson and something that four of the five participants regularly practiced. How the goal attainment was measured was vague if not non-existence, relying on verbal feedback to assess outcomes. It was felt that development tracking and measurement would be useful to provide rigour to student goal attainment feedback. General instruction and feedback were already highly considered by each participant as they varied vocabulary and phrases to accommodate student ability, student schema and preferred language.

PC reflected upon the loneliness of being a teacher in interview 1 as a reason they would be open to a new framework or method of teaching. A study by Zhu et al. (2013) investigates the core competencies of teachers in relation to their teaching performance and considers that a supportive relationship with colleagues plays an important role in innovative teaching. The aspect of isolation as a teacher could be considered within the schema as a means to give teachers further validation to the teaching methods employed (IELTS, 2024).

Post-Schema Implementation

The schema was found in general to be easy to implement, although this was considered student dependent and governed by some degree by the varying number of students each participant used. The more students they used, the more likely they were to experience negative response from an individual. Nonetheless, each participant agreed that the schema enhanced their knowledge of mindset in some capacity and would be prepared to use it fully or in some form.

A positive reaction to the schema yielded one hundred and two (102) positive comments, compared to eighteen negative comments, with the highest value placed upon the benefit the schema had to the participant. All the participants were likely to utilise at least aspects of the schema again, with PA and PE suggesting they would also use it in other instrument lessons as viewing it as a transferable model. The negative comments were in most part due to some student reluctance to engage fully. The varied student responses were difficult to determine fully since they were not known to the researcher. Comparisons drawn between the mindset scores of each student and their goal engagement and reflection development only served to corroborate the studies in the literature review of Woods (2020) and Yu and McLellan (2020), whereby the mindset of the student does not necessarily coincide with developmental trends. A strong sense from some participants that students falsified their scores, unfortunately distorts the results.

Kagan (1992) suggests teacher belief is, in part, defined as unconsciously holding assumptions about students, a theory that might be impactful to research into the psychological behaviour of a student. Whilst they all considered they knew their chosen students well, each participant utilised the schema to corroborate their current assumptions or to discover more about their students.

To fully understand how much the participants gained from the schema, they were asked for suggestions to further its development. A significant response was the need for more prompt questions to illicit greater discussion with the student and prevent ambiguity in feedback. Although the record sheets were designed to accommodate further comments, this was not felt to be enough, and the participants felt teachers would require more support from the schema to facilitate more qualitative discussions to inform student development.

Review of Limitations and Recommendations of the Study

A disadvantage of the semi-structured interviews was, as Jennings (2005) reflects, the volume of material generated, and time needed for analysis. The alternative was a structured interview method which may have not yielded such in depth response (Osborne, 2021), and so the time invested was crucial to discover the participants' opinions and gather "rich descriptions of phenomena", allowing for analysis (DiCicco-Bloom and Crabtree, 2006:314).

The rounds of coding yielded more data than had been imagined from the proposed research design and as such, necessitates further disaggregation to assimilate the unexplored components. One example is the issue surrounding the false responses given by students undergoing profiling. Given the subjects were potentially falsifying their answers to appear more positive or adept, such human reactivity could possibly be attributed to a theory in line with the Hawthorne Effect of the 1920s and 1930s, where factory workers were given more light to work by as part of research and improved productivity considered due to the attention being paid to them (Kenton, 2022). According to the Hawthorn study, people will modify their behaviour positively since they are being observed and evaluated. The phenomenon can affect many situations including dietary habits and hygiene practices through to study results. A study of the Hawthorn Effect on research participation posed that impact on participants does exist, although little was determined regarding the conditions under which they operate, and further research into new concepts would be needed to guide empirical studies (Epidemiol, 2014).

A constraint of understanding general teaching flexibility towards learning, was only having participants who are former or current students on the MA in Vocal Pedagogy course. This was not intentional and vocal teachers without such a background had initially expressed an interest and then disengaged from the study for undefined reasons. Perhaps this suggests that only a homogenous group would implement such a schema. The participants were fully engaged in learning and developing their knowledge, skill set and vocal studios which apparently came from a strong student-centred approach to teaching, the need to create and or develop lesson structure, and a general desire to develop personal competencies. More rigorous purposive sampling would be desired in future research to seek a more convincing perspective of epistemological change including non-MA students and male participants for a balanced study.

Fully understanding the behavioural patterns of participants in a study should be further considered as part of evidence-based research (EBR). As Lund et al. (2021) postulate, a systematic EBR approach provides the context to draw valid and explicit information to inform new research needs. In this way, in depth literary research would be conducted to establish all the theoretical knowledge surrounding the themes that have emerged from the data of this study. A structured approach to encapsulate and refine the research process is, as determined by Emmel (2014) complex, although possible through qualitative secondary analysis (QSA). Although more widely used in quantitative data, Heaton, (1998) suggests revisiting and focusing on particular findings within a qualitative study to further develop new concepts are supported in the research of Szabo and Strang, Angst and Deatrick, and Bloor and MacIntosh. Tarrant (2017) offers a balanced argument that caution should be exercised due to secondary analysts potentially treating data as fully cleansed and losing the core aspect of the researcher-participant relationship.

Further considerations include those mentioned on p.14, that research into the interaction of male teachers with their students would be pertinent to gain a full understanding of epistemological change through use of the schema. A separate study into singing teacher epistemology in different areas of the world would perhaps be pertinent to the study for further development but beyond the remit of this current project.

Some of the participants wanted to explore the schema over a longer frame of time which would be beneficial to fully understanding the developmental changes of the student. Furthermore, and critically to this study, retesting the student mindset after a semester or longer would have provided evidence to suggest an improvement or decline of the student.

This is recognised as undeniable but unavoidable flaw of this research. A future study would be conducted over a longer period of time to ascertain such information.

Participants considered teaching competency as placing students at the centre of their teaching, feeling responsible to their students' needs, and understanding the voice mechanism as well as student psyche. A full and varied response perhaps suggests a teaching manual for vocal teachers to incorporate each of the considerations for a comprehensive guide to one-to-one vocal teaching inclusive of anatomical, technical, psychological and teacher role in vocal pedagogy. Furthermore, more prompts to aid teacher-student discussions would be explored to support the varied student needs. Extensive research would be required to enable this with the help of a team of experts in each field.

Conclusion

The data received from the participants supports the schema as a beneficial tool in the vocal studio, although considerations of improvements would need further research before implementation. It is not in question that a small sample of vocal teachers who are seeking continued professional development in academia consider the psychology and schema of the student to be of importance and are therefore flexible in embracing a new teaching tool. However, more balanced research would be necessary to quantify the opinion of teachers who have not considered such further training or new provisions in their studio. Whilst assertions are made that student reluctance to participate is a disadvantage of the schema, further research with teachers of varied educational standards would perhaps deduce whether teacher reluctance may equally be an issue. Although the research has unwittingly been biased towards the opinion of teachers from an academic background and not representative of all vocal teachers, gathering data of teachers at a high level of academia offers rigour to the study, since the participants are likely to have scrutinised the schema through a developed lens.

Most value was placed upon the insight into mindset measuring, a tool that was not previously recognised amongst the participants, and the structure the goal setting and attainment record keeping presented to the lesson. Participants were already fully aware of adjusting instructional and feedback vocabulary and phrases and this element was not widely considered to be impactful in the schema. It is not evident that there was any

noticeable change in teacher epistemology although this may be different when researching with a different set of participants of varied training backgrounds and not to be discounted at this stage.

The research set out to enquire into current teacher knowledge and opinion on student psychology, mindset and resulting goal orientation. The results suggest that students are complex individuals which is at the core of understanding their learning needs and at some level, teachers are aware of this. The participants appeared to value guidance in the structure of the lesson where they can incorporate methods of progress measurement and utilise comprehensive templates to inform discussions with students. To this end, the singing mindset tool and Likert scale system are usable and provide adequate information, but for a teaching model of substance would be enhanced by qualitative feedback.

The aims and objectives of this study were achieved in that:

- An understanding has been reached that current mindset knowledge is vague amongst vocal pedagogues,
- Mindset research is applicable to the singing studio,
- It is apparent that appropriate terminology in instruction and feedback is already considered according to the sample interviewed,
- The framework can be further developed if encompassing both a qualitative and quantitative design,
- That goal setting and mindset profiling offer valuable measuring systems and structure to the vocal lesson,
- That vocal teachers are responsive to the implementation of mindset profiling.

The findings of this project suggest the scope to develop the schema further with advanced research into prompt questions for the teacher and student discussions and a longer study conducted to gauge mindset of the student over at least a semester. If mindset was proven to grow as a response, a model would be designed to implement the schema into vocal teaching. If no mindset change was recorded, further research into why would be necessitated.

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APPENDICES

Please note: All names that may appear on transcripts and on record sheets pertain to students were changed for the sake of anonymity.

(All appendices are in a separate file for submission upload purposes.)