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Work-based Learning Project

Developing a vocal wellness magazine for adolescents.

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Research Proposal

The Context & Justification

This final project takes place in an International School in the Middle East where the researcher teaches Music to middle school students. Historically the primary method for curriculum delivery has been singing but since the Covid-19 pandemic unravelled across the entire world, students have not participated in singing for an extended period of time especially because of the added health and safety risks this presents with increased aerosol transmission (Alsvad et al., 2020). With a break of some years from singing in school combined with the changes that adolescence brings to the voice, classroom observation has been that students often do not truly understand what is happening to their voice during puberty nor are they able to make links between how physical and psychological adolescent shifts may also adversely affect them at this time. Changes in sound can lead to a lack of confidence in their voice, predominantly at a time when they may be experiencing vulnerability and are potentially susceptible to low self esteem and the negative self-judgement that adolescence can bring (Gackle 2014). One should also take into account alongside this the implications the pandemic has brought on young mental health resulting in “unprecedented hazards” globally (Xiong et al., 2020). There has been a more predominant focus of late on female voice change amongst researchers and despite leaps forward in our understanding in these areas there remains a deficit of resources aimed specifically at adolescent performers to support both genders as they navigate voice change during this specific time (Turcott 2003). Predominantly there is a range of literature specifically covering either voice change or adolescent change but very few which address both of these topics simultaneously, which presents a gap this project seeks to address.

The Intended Impact

This research will lead to the creation of a digital magazine, the target demographic being young adolescents. The magazine will contain resources and information aimed

at supporting them during voice change in adolescence. Accessible online, the end product will be available to students and staff within the organisation. If the resource proves successful and of benefit to the learners it could also be made readily available to other schools and performing arts institutions. As the resource is digital it can be shared easily via appropriate channels (Bolduc-Gosselin, L.M., 2018).

The Outlined Intention

An initial literature review will be conducted into adolescent development and voice change. The intention is also to look into contemporary emerging research on wellness in music education. A short questionnaire will then be used with students to reveal topics to explore in greater depth. Opinions from the adolescents themselves regarding what they think they need to know will provide a catalyst for wider reading. Cooper's Taxonomy of Literature to Review (Cooper 1998) will be used to further shape this.

The epistemological belief falls under interpretivism and phenomenology and the research paradigm here belongs to the school of constructivism/interpretivism. Seeking not to give a definitive answer but more an overall picture of students' perceptions of what they require, as "the researcher seeks to establish the meaning of a phenomenon from the views of the participants" (Creswell, 2014, p.48). This is inherently important due to the nature of the aims and objectives of this study as the outcomes will hopefully directly impact student learning. Qualitative data is required to answer the primary questions of this study, therefore the research undertaken will be based on subjective human experience rather than objective external human reality, (Kivunja & Kuyini 2017). This research aims to bring illumination and understanding to this area of study (Hoepfl1997). As an action research project, it has a practical nature in its direct application and use of students in the feedback loop. Seeking to address a gap in resources which has been identified, it is the participation of the students in this research which is vital in order to create the most relevant result.

The research methodology forms 3 parts:

1. An initial literature review followed by a student questionnaire - after the initial literature review the following questions will be posed to participants:

- Is there anything you find challenging about singing as you grow up?
- What content would you like to read in a magazine about how your voice changes as you grow up?

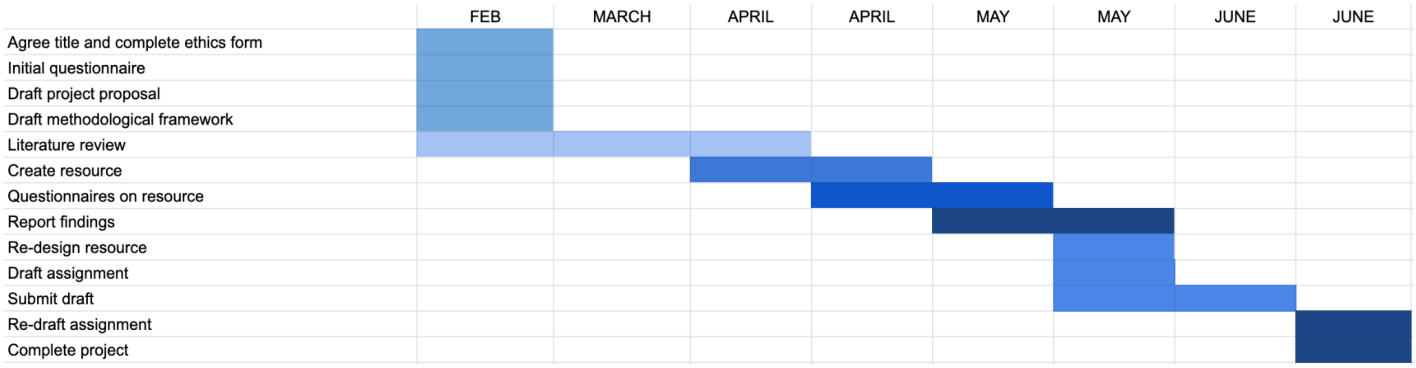
2. An extended literature review guided by the responses to the questions above from which magazine content will be designed and drafted.

3. Analysis and synthesis. Qualitative feedback on the draft magazine will be collected, after analysing and synthesising this, adjustments will be made to the product to best suit the needs of the students. The data collected will shape and form the look and final content of this product.

The term dependable was presented by Lincoln & Guba (1985) when discussing the reliability of qualitative research. In regards to dependability steps will be taken to ensure questionnaires are structured to measure the appropriate data, responses are intended to correlate with the needs of the target audience. The use of open ended questions should also support the application of rigour to this study (Davies and Dodd 2002). Lincoln & Guba also posed the question “How can an inquirer persuade his or her audiences that the research findings of an inquiry are worth paying attention to?" (1985, p. 290). This will be particularly relevant as the target audience is young and voluntary. Participant bias will be limited by framing questions appropriately and by seeking a large sample size and range of ages across the adolescent spectrum. Acknowledgement is made that this is a small scale research project wholly focussed within one institution so the application of further rigour here is vital to its success. As a social researcher we are called upon to interpret data and therefore the findings will be shaped by personal world views and professional experience, as an insider to this we must acknowledge bias here (Denscombe 2017). The perspective of other professionals

will be sought during this project, practitioners outside of the organisational bubble to add insight and to further facilitate critical depth to this project.

Planned programme of study



The Ethics

This will be an insider led research based project (Vygotsky 1962, Lave & Wenger 1991). It is considered a privilege to be able to work on a project which will be guided by and result in a resource for students. This project has full support from the school's senior leadership team and the school community (Appendix 3). Ethical approval has been completed (Appendix 5) and will be upheld throughout the process, adhering to the procedures and practices stated in the school child protection handbook which is aligned with all Omani Laws, United Nations Rights of the Child and International School expectations worldwide. Suspected incidents of possible child abuse will be reported and investigated as per Omani Law and the child protection protocol as outlined in the school policy statement. Approval has been given from the head of school and the school counsellor in regards to the sensitivity of the research topic and student involvement. Participants will be consenting music students grades 4-12 who participate in the school singing after school program. As this project involves dialogue between teacher and student, care must be given to ensure that this does not hinder or influence student responses and consideration must be given to respect the rights and sensitivities of the students involved, (Winter 2003). Participation is elective and

students may withdraw at any time. Protocols will be followed regarding consent forms, data storage and anonymity (Appendix 4).

Personal Learning Outcomes

Personal Learning Outcomes
To broaden knowledge and understanding of adolescent voice change and wellness in music education and develop awareness of how best to support students during this time.
Development of computer design skills in creating meaningful and relevant digital resources.
To promote further dialogue and research in the area of female adolescent voice research with a dual focus on adolescent physical and mental development.

The personal learning outcomes of this project are to broaden knowledge and understanding of adolescent voice change and wellness in music education and develop awareness of how best to support students during this time. As a middle school educator this new knowledge and expertise will greatly underpin further curriculum delivery. The development of computer design skills in creating meaningful and relevant digital resources will help in promoting further dialogue and research in the area of female adolescent voice research efficiently and effectively. The focus combination on adolescent physical and mental development is not one readily seen in this marketplace.

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Research Report

Introduction

This study will be conducted within the Middle School Music department of a leading International school in the Middle East. This department educates over 240 learners from a diverse community of over 60 countries. The Covid-19 pandemic created a massive educational disruption, felt by 1.6 billion learners in more than 200 countries, (Pokherl & Chhetri 2021). As educators return to a more conventional approach to teaching and learning we must ask ourselves how we can “put Maslow before Bloom”. This popular phrase often used by teachers alludes to how we should consider Maslow's Hierarchy of Needs (Maslow 1943) before Blooms Taxonomy (Bloom 1956). This research project seeks to support music students by addressing these more psychological needs as perpetuated by Maslow. Middle school learners in the Middle East have experienced a continued hiatus in music education as the drive to reinstate singing specifically as an educational activity during the pandemic was not a priority here, as it is not part of the curriculum for many schools.

Oman’s Ministry of Health offered no protocol for schools as face to face education resumed. Without specific mandates from the MOH, school policy was for students not to sing. Our adolescent learners have not sung for over two and a half years, this coinciding with a developmental time when they are experiencing many intellectual, physical, social, emotional and psychological changes, (Santrock 2005). We are all learning to navigate many new challenges which present themselves in the classroom as a result of this suspension in studies and surge in hormonal changes (Buchanan & Becker 1992). A policy brief released during August 2020 by the United Nations entitled *Education during Covid 19 and beyond,* gave a recommendation to strengthen data and the monitoring of student data. This project seeks to apply this advice in regards to collecting specific data relating to challenges felt by students, resulting in a magazine resource which informs and supports students as they face these obstacles, “when digital and creativity can be combined in the most appealing ways, digital magazines

have many opportunities to make a difference" (Santos 2011 p. 2). It seeks to be an immediate resource applicable to learners right now. This resource is even more relevant as the students at this institution only receive 12 weeks of specific music education per year so learning must be underpinned with additional aids to ensure knowledge and understanding are developed to their fullest. Stemming from this it may also expand personal abilities in vocal pedagogical practice with adolescents and feed into the wider curriculum of this establishment. The wider curriculum goes beyond the scope and sequence of expected learning and embraces experiences which feed into child development, not solely qualification-based.

Firstly, students were asked to respond to the question *Is there anything you find challenging about singing as you grow up?* The answers to which were analysed and categorised and data used to further expand the literature review in the areas of performance anxiety, voice cracks and loss of confidence during adolescence. Information was also collected using the question *What content would you like to read in a magazine about how your voice changes as you grow up?* With this data and the knowledge and understanding gleaned from the literature review, a draft digital magazine was created using a web based platform called flipsnack.com. This draft was then read by a selection of students who contributed to the initial questionnaire. They provided feedback on content and design which was then processed, reflected on and actioned in the final draft. It is hoped that this final product will be a timely and sympathetic resource, originating from raw student data and refined by their contributions. The intended impact is not purely to provide knowledge of the adolescent voice, it is more philanthropic in the hope of addressing areas within self-esteem and self-actualisation. The belief is that if it supports at least one learner during this time and keeps them singing then it will have proved successful and beneficial. The aspiration is that it may benefit a far larger audience and will feed into a broader movement of raising awareness within voice change and in challenging the simulacrum that this is perceived as a period of "humiliation, anxiety, turmoil and dread", (Sweet, 2020, p.80).

Literature Review

Cooper's (1998) taxonomy of literature reviews table has been considered in relation to conducting this literature review of textbooks and peer reviewed articles (Appendix 1). An exhaustive summary of research areas is not possible within the field of this project, however please note that this is a culmination of previous research within this scope of study and as such the focus of this literature review is on contemporary theory, the most up to date and relevant theoretical knowledge required to disseminate to students. The goal will be to identify central issues and explore these in depth. An espousal position is acknowledged in this study due to the personal learning outcomes, and the review will be organised in a conceptual format. The audience here are not scholars and policymakers but adolescents and the general public; therefore, the tone of the resource created will reflect this and the language used will fit this demographic.
Key contemporary texts were identified to add further insight.

Burton, S.L. and Reynolds, A. eds., 2018. *Engaging musical practices: A sourcebook for elementary general music*. Rowman & Littlefield.

Dimon, T., 2021. Anatomy of the Voice: An Illustrated Guide for Singers, Vocal Coaches, and Speech Therapists.

Harrison, S.D. and O'Bryan, J. eds., 2014. *Teaching singing in the 21st Century*. Springer Netherlands.

J. and Kayes, G., 2018. *This is a voice*.

Sweet, B., 2020. *Thinking Outside the Voice Box.*

Williams, J., 2019. *Teaching Singing To Children And Young Adults*. Second Edition.

The voice is a biomechanism which grows as the rest of the body develops. These developmental changes follow a similar pattern of growth for all genders. This changes when puberty begins and the body reacts to high levels of testosterone, resulting in a

dramatic change for boys as they experience a surge in growth (Fisher & Kayes 2016). The research of Cooksey (1977, 1984), Killian (1997, 1999), Philips (2013), Fisher (2014), Gackle (1991, 2006, 2011) and Sweet (2015) and the classification systems that stemmed from this have shown that both boys and girls go through a certain number of stages as their voice changes (Weiss 1950; Kahane, 1982; Luchsinger & Arnold, 1965). These changes can present themselves in the following ways; insecurity of pitching notes, voice cracks, breaks in register, a husky tone, smaller or unpredictable range, uncomfortable singing, breathy or rough tone, breathy or thin quality, and loss of voice or hoarseness. During the third stage of male voice change is when boys are most likely to experience voice cracks as they continue to adjust and navigate their voice as it settles down (Fisher & Kayes 2016). During adolescence the calcification process of the larynx cartilages has not yet occurred and while they are at this stage they are more susceptible to potential damage, (Trundle 2005). As hormones begin to rise in girls, around 8 years old, fatty tissue is laid down around the areas of the thighs and stomach, which is a source of the hormone oestrogen. It is this which relays a message to the brain to prepare the body for ovulation. The onset of menstruation brings with it a complex mixture of hormones which is sometimes referred to as the *endocrine cascade* (Roemmich & Rogol 1999). The effects and symptoms of these hormones can be felt in various ways vocally: the most extreme being a swelling in the vocal cords (Abitbol, Abitbol & Abitbol 1999, Higgins, S. W., et al 2001). The voice should not be used excessively during this time (Amir, O. & Biron-Shental, T., 2004). Classification of voice type should not be assigned until this mutational period is complete, and technical exercises and repertoire need to be chosen with this in mind (Chapman 2006). A preliminary study using Gackle's (2000) voice change model showed that puberty can start younger than anticipated as participants were hitting stage one younger than suggested in the model (Decoster et., 2008). This also aligns with the results of a larger study by Herman Giddens (1997) and thoughts held by Tanner (1971). Decoster's study (2008) also reflected that girls were able to sing notes lower than suggested as the lowest applicable at each stage, the fundamental speaking frequency was also lower in these instances. Fundamentally in the developing world, girls are getting taller, larynx's are getting larger and female vocal folds are growing, creating extra depth and added

range (Decoster et., 2008). Perhaps this, combined with less pressure to conform to society's expectations of what a ladies voice should sound like, could well be contributing factors to this extended range. Williams (2019) also attributes psychosocial development and the tendency for adolescent females to shy away from environments that may be male dominated as having an influence on girls preferring not to utilise their higher, more vulnerable register.

We often take our voice for granted until it goes wrong. There are many factors which can contribute to this: our lifestyle, the way we use our voice and or our anxiety and stress levels. Voice disorders are quite common in young children, with up to 20% being afflicted. Often these disorders alleviate as vocal technique and functionality develop (Williams 2019). Some advice for maintaining good vocal hygiene includes, warming up the voice appropriately, seeking technical training, remaining appropriately hydrated, semi-occluded vocal tract exercises (SOVT) and steaming the voice, (Fisher, Kayes, Matthews and Connor, 2016). Vocal folds which are appropriately hydrated use less energy when vibrating, which results in less friction in the larynx (Callaghan, 2014; Jahn, 2019; Titze, 1983). Chapman believes appropriate posture is crucial in terms of creating an efficient voice. The inhalation, injecting or swallowing of drugs can affect vocal production, and smoking can damage the voice irrevocably. Specifically to women, the menstrual cycle can also have an affect on how the voice functions during this period (Bunch 1982). Habitual voice clearing is also viewed as being detrimental to the functioning of the vocal folds (Bunch 1982;,Chapman 2009;, Fisher, Kayes, Matthews and Connor, 2016; Williams 2019).

Wellness in music education remains a fairly recent area of discussion. At its fundamental core, research suggests that teachers should lead by example, not simply to foster this ideal in students but to ensure that they too stay well (Cherkowski et al., 2018; Norton 2019; Rachele et al., 2013; Sackeny et al., 2000; Taylor 2016). Holmes (2019) advocated for this, stating that this also impacts classroom and school culture positively and there have been recommendations for further application of this built into curriculum (Pierce 2012). Literature in this area has a focused on the body (Conable 2000, Kleinman & Buckoke 2014, Rosset i Lobert, J & Odam, G. 2007), and on areas of

the mind including mindfulness (Cornett, 2019), yoga (Olson, 2009) and stress and anxiety management (Nagel, 2017).

Self-efficacy is an important consideration here. Albert Bandura (1977, 1986, 1997) was the first to propose this term, which relates to how an individual feels about their ability to perform a task. This is different from self confidence, Bandura (1997 p.382) defines confidence as a “nondescript term that refers to the strength of belief but does not necessarily specify what the certainty is about… it is a catchword rather than a construct embedded in a theoretical system”. Bandura also went on to say that there are two types of self-confidence: one stemming from knowledge of the subject and the other from a personality trait. He warns as educators we should facilitate confidence derived from knowledge and not the latter. Pajares (2005) feels that a student's self-efficacy belief system is the foundation for individual success in all aspects of life for if they do not believe that they can achieve, what incentive can there be to face the challenges that present themselves in adulthood? Miller believes that “a pessimistic singer is not a successful singer; mental attitude can make or break a career” (1996, p.239). Chapman (2007 p.151) feels that “voice connects students to their sense of self or soul which is their primary source of expression to the world”. Gackle (2014) also suggests strong connections between the changing voice and how we identify with ourselves. She proposes that how an individual is accepted by others correlates with how we relate to ourselves. Sweet (2020 p.15) has noted that posture in adolescents is often slumped to give off a “leave me alone vibe” especially if a student is feeling self conscious and that voice teachers should support adolescents to feel more confident during these physical changes. VanWeeden, Davis and Singletary (2019) made recommendations that feedback should be given on students' participation level and not on specific ability, noting that this can diminish anxieties relating to singing in front of one's peers. Joshua Palkki (2022) believes the perception that singing is either for females or for talented singers is an obstacle to engagement in the classroom, particularly in America. Sweet (2019) Yarnell (2006) and Frith (1987) all advocate for choosing material that not only suits the vocal range of the participants but pieces which will inspire them to actively engage in the music making process. Adolescent egocentrism, a term coined by child psychologist David Elkind (1967) can also be a

barrier to development of students at this age because they are unable to differentiate between what they think people think about them against actual reality (Santrock 2005; Wright, 2005; Nakkula & Toshalis 2006; McCoy 2018; Erikson 1968; Telzer 2016). Sweet (2020) refers to this as the “invisible audience”; she encourages us to make this more of a known audience, as teenagers can control very little at this time so we must give them the information to empower them.

As the prefrontal cortex in the brain develops there can be a change in adolescent behaviour due to an imbalance in the rate that the emotional and decision making parts of the brain grow (Armstrong 2016; Casey, Getz & Galvan 2008). Research suggests that when adolescents are with friends they are more likely to be affected by emotionally driven decision making which can be inherently risky in nature (Blakemore & Robbins 2012). The environment a young person is exposed to has an impact on their cognitive process. (John Steiner & Mahn, 2003). Romeo & McEwen (2006) believe that the plasticity of the brain during this time also leaves adolescents more susceptible to stress. There were many advancements during the 1980’s in regards to anxiety disorders in children and adolescents (Bernstein & Borchardt 1991). The condition known as social anxiety disorder often begins during adolescence, at a time when friendship circles become paramount, once manifested this condition can also transfer into adulthood. Leigh & Clark (2018 p. 2) state there are “clear potential benefits to delivering effective interventions during adolescence”. Sweet (2020) explains that there are two main reasons for considering the teenage brain in vocal teaching, firstly because brain growth can justify adolescent behaviours and secondly because as educators we have the power to constantly influence the adolescent brain in a positive manner.

Music Performance Anxiety (MPA) is a relatively common form of anxiety, estimated to affect 15-25% of professional musicians (Fishbein et al., 1988). Dr S Harris (1986) provided coping strategies to empower music students who suffered from acute anxiety when performing using cognitive and physiological processes. She promotes the idea of making friends with the nervous feelings rather than fighting these sensations with negative thoughts, and encourages performers to make “task relevant” rather than “task

irrelevant” statements during shows. Meribeth Bunch Dayme (2009) offers perspective on the language of the mind. She says what we learn from key figures during our adolescence contributes to our internal monologue and the way in which we converse with others. She goes on to expand this into an analysis of left and right brain, noting that if a performance is learned through endless repetition it is only stored in the left side of the brain and will more likely be forgotten when nervous. Combining the learning of words with the use of movement, creating colours or pictures will mean the right side of the brain is activated and the performer is more likely to succeed. This is reiterated by McCoy (2021) when she addresses body awareness and how the opportunity to move in more dynamic and creative ways enables adolescent learners. Robertson & Eisensmith (2010) developed a model to support students in managing anxiety that uses metaphors for the working memory and intrusive thoughts. This simple method is easily accessible for all age ranges, providing a useful tool to use with middle school age students. There is a strong volume of research showing that Cognitive Behavioural Therapy (CBT) has proved extremely successful in managing MPA (Kenny 2011). This has led to other psychotherapy behavioural treatments emerging, one such idea, Acceptance and Commitment Therapy (ACT) has also shown some success when dealing with extreme cases of anxiety (Juncos et., al 2017; Clarke et al., 2019). The use of positive affirmations and the inclusion of promoting perseverance when engaging in singing has been shown to have positive effects amongst adolescents, (Bari, Rami, Devip, Ready 2021; Sweet 2019; Hatzigeorgiadis 2009). Williams (2019) suggests controlled breathing as good preparation for performance and recommends trying out performances on a smaller scale as a precursor to the real thing.

Research Methods

Engaging in practitioner-led research allows for knowledge of the practitioner to grow whilst developing their own practice within the organisation for which they work (Costley 2006). Often this type of research is conducted by professionals who are, “immersed, embedded and strongly connected with both the setting and those being ‘researched’ in a shared setting where they operate together on an ongoing basis” (Smyth & Holian,

2008, p. 34). Employment in this role for 6 years has led to a familiarity with both the school, its systems and the students. Gay and Airasian (2000) state that educational research is the methodical implementation of a group of methods that are used to provide reliable information about problems within education. There are “a group of methods” at play here. The researcher is practitioner and also the instrument for this data collection thus bringing their own perspectives to the selections and meanings of the data. Eisner (1991) observes that qualitative research hinges on the capacity of the researcher to be effective rather than the process of standardisation to be rigorous. This will be of great importance whilst working with qualitative data of this type. Maximum variation sampling was chosen to show a heterogeneous cross section of the school cohort (Lincoln & Guba 1985) and answers to questionnaires are anecdotal and observational; there was no use of a Likert scale or quantitative data collection. Patterns that transpire from this method will be “of particular interest and value in capturing core experiences” (Patton, 1990, p.172). As Sharan Merriam and Elisabeth Tisdell comment (2015, p.40):

> The analysis of the data involves identifying recurring patterns that characterise the data. Findings are these recurring patterns supported from the data from which they are derived. The overall interpretation will be the researchers understanding of the participants' understanding of the phenomenon.

Action research is the method applied during this study, Stringer (2008) developed the model Look, Think, and Act and it is used here in the following way:

Look - the researcher has observed the challenges faced by adolescents as they navigate voice change and puberty.
Think - data will be collected directly from and in response to the magazine draft from students in the first and second questionnaires.
Act - the magazine content and design will be shaped by this feedback cyclical feedback loop.

There is a desire to address a perceived deficit of age appropriate resources to support students during adolescence, both in vocal and change and in adolescent wellness. Action research is immersed in an agenda for change (Hine 2013) and there is also a need in part to resolve issues witnessed in the classroom regarding student confidence and self efficacy as students mature. This is also a phenomenological study driven by what students experience, by what they feel they need. The researchers' preconceptions are not required here. The researcher will need to interpret and construct the magazine as a result of involving students in this action research loop. This project is a practical/mutual collaborative/deliberate mode of action research where practitioner and student collaborate to discover challenges and obstacles and possible solutions (Holter & Schwartz-Barcott 1993, p.301) The main problems are only identified as a result of this collaboration, termed “practical action research” by Grundy (1998, p.357), with a goal to understand practice and solve pertinent problems.

Steps & tools to conduct research

Participating students are middle school learners who have recently returned to face to face instruction following some two years of online education. Although back in a school setting, activities are still limited and masks remain compulsory on campus. Participation in this research activity is entirely voluntary and completely anonymous, no participant data will be collected and students will be sat independently whilst completing questionnaires. During convenience sampling students will be asked two open questions, *Is there anything you find challenging about singing as you grow up?* and *What content would you like to read in a magazine about how your voice changes as you grow up?* There is then space for the respondent to answer personally, with their own words. There are no tick boxes, answers rely wholly on the students to consider and respond without external prompt or guidance. Intentionally, it is the hope that the answers gathered will be impartial and remain the thoughts of the participants. Zero order level of communications is chosen here and words and ideas are communicated in their simplest form (Berg 2017). This approach will generate a large amount of

qualitative data. Open coding (Strauss & Corbin 1990) will be applied with the discovery of common themes and challenges. Common themes will then be re-examined during a period of axial coding where data will be sorted and further translated into percentages which will be represented in a visual format. Salient themes scoring high percentages will be selected for representation and triangulated with content requests put forward by the learners. The magazine will then be drafted and shared with the student body for feedback in the form of a second questionnaire. Again zero order level of communications will be used here and the second questionnaire will be presented in its simplest form. Purposive sampling will be used by selecting a cross section of students, random males and females spanning the middle school population who have also taken part in the first questionnaire. For each page in the magazine students will be asked to comment on images, font, layout and content. This feedback will then be considered in the final redraft before the release of the product in its final form.

Ethical Considerations and Limitations

Ethical permission was obtained under the guidance of core ethical documents, UWTSD Research Ethics and Integrity Code of Practice, UWTSD Research Data Management Policy, procedures and practices stated in school child protection documents which are aligned with Omani Law, United Nations Rights of the Child and International School expectations worldwide. There were no external collaborators to this study, nor is there any external funding. The scope of the research does not include any illegal activities, use of substances, deception or animals.

At the heart of this research are the thoughts, opinions and perspectives of school children. As such there are specific ethical considerations at play, full ethical approval has been given both by the learning institution and by the school to conduct this research. Consent forms for participants have been acknowledged and both parents and employers are completely aware of this research activity and have given full consent. Kirk (2007) identifies three main considerations when research involves children, these being power relations, informed consent and confidentiality.

Reassurance has been given to participants that by engaging in this research they are not assisting or adversely affecting their position within curriculum classes. Students have full autonomy and choice regarding whether they take part or not and are also aware that they can exit the process at any time should they wish. Communication of the research project has been absolutely transparent, both students, parents and senior leadership have full access to the outline and methods of data collection and are in the receipt of a mode of contact for the researcher. Content and identity of participants is completely anonymous and the researcher is not able to individually identify participant responses. No personal data or special category will be gathered. Any research will be kept in password protected storage on a personal laptop which will not be shared. If data is moved to another device or storage system it will again be password protected. All contributors will be given their own number to guarantee confidentiality and this information will also be kept in a password protected folder. The information will be kept until the end of the research project and then deleted. Participants may ask to see what information is on file relating to them, and this information will be erased immediately if the student asks and if this is requested the statistics will not be used in the study. The sensitivity of topics around puberty carry extra weight in a country where cultural restrictions are upheld and extra deliberation will be given regarding the inclusion and or exclusion of controversial content within research methods and magazine content. Approval and guidance was sought from the school counsellor who is in full agreement and support of the project outline. They were consulted during the design and approval of consent forms (Appendix 6).

Limitations to this project must be acknowledged, Bakhtin (1981) highlighted how a school environment contributes to shaping the child's voice. As this project only involves students from one school this must be considered and reflected upon. A research pool from a range of schools would have added some level of mitigation regarding this but it would have added a complexity to gathering research which would have been difficult to manage given that we are still experiencing heavy health and safety restrictions. Spyrou (2011) calls for an acknowledgment of power relations within research, proposing that the silence of children may tell us more than the collection of perspectives. Not all of the

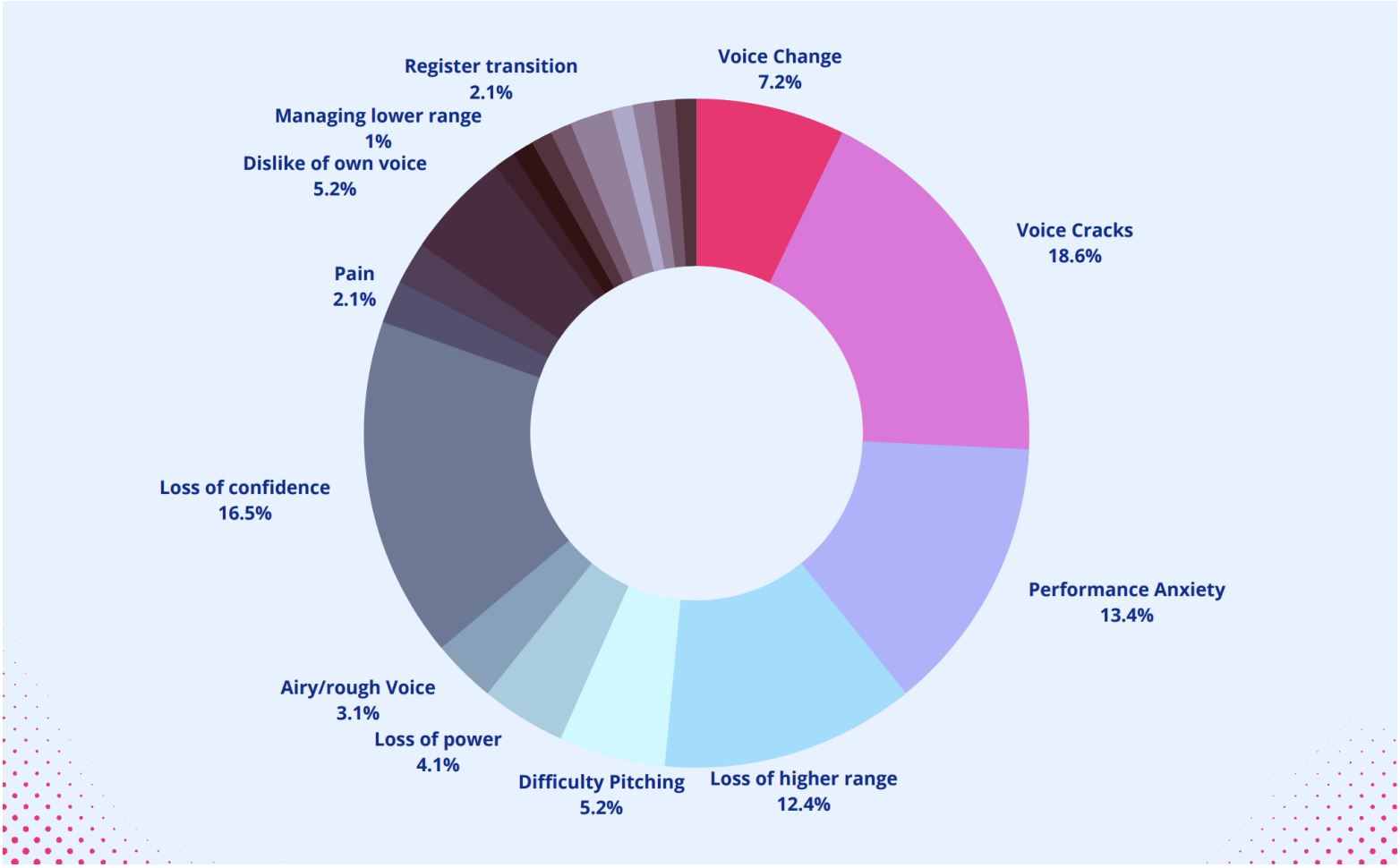
participants in this project are singers, nor have they been taught or had music lessons due to the Covid-19 pandemic for a considerable amount of time. It could be justified here that the answers collected are more likely to truly represent the current need in the school and their own thoughts and feelings given this prolonged absence from a normal learning environment and the hearing of a teacher's voice. Effective management of the research will be required to align the collection of responses to enable completion before the end of the school year on June 17th 2022. Time management is key to the execution of this research project which also coincides with other fundamental projects completing at the end of the school year. Appropriate planning, timelines and scheduling has taken place to enable this process to be successful. Consideration must be given to acute stress management for the researcher and the potential overwhelm a project of this size and nature may promote. Mental health in academia is an issue that needs due regard and care and support will be accessed when and if required (Guardian 2014). Insider research is imbued with the views and perspectives of the researcher, especially if the project happens in their place of work (Greene 2014). There are of course positives to be gained here: knowledge of the research environment and of the subjects, familiarity with the target group, access to the target demographic. When considering the negatives, DeLyser (2001) notes that knowledge of the environment and participants can result in assumptions being made which are derived from the researchers prior knowledge and not the research being conducted. There is bias here, it is a work based project, designed to impact teaching and learning, however Aguiler (1981, p.26) values this bias as a source of “insight as well as error”. Steps have been taken to ensure that the participants' voice is heard louder than the researcher's voice and that the presentation of research remains as objective as possible. In regards to reflexivity it is paramount that thought is given to the social and emotional dynamics of the students but that it does not influence the interpretation of the data (Mauthner & Doucet, 2003).

Presentation of Findings

Data analysis generally follows five stages (Creswell and Piano Clarke 2007) the content analysis here has followed this guidance. The rigour of this study is measured on internal validity, external reality and reliability (Guba & Lincoln 1985, 1989). During the first research activity, two questions were posed, "*Is there anything you find challenging about singing as you grow up?"* and *"What content would you like to read in a magazine about how your voice changes as you grow up?"*. 83 students aged 11 - 18 chose to participate in this stage of the research, their responses were prepared and answers were downloaded from Google forms into a spreadsheet (Appendix 2). This raw data was then put forward for analysis, columns were added to support exploration of this through the writing of notes and thoughts alongside student answers.

When looking at the responses to the first question - *Is there anything you find challenging about singing as you grow up?* A column was added to make notes of the topics covered, to categorise them and to count how many times similar or the same topics were mentioned. These numbers were then tallied and converted into percentages for further scrutiny. However even before this stage of analysis the most prominent underlying issues were recognisable immediately due to the volume of comments which used similar terms. These areas fell within voice change and self-confidence/self-esteem as the terms "voice cracks", "low confidence" and "anxiety" were mentioned, specifically also feeling anxious singing in front of others. For students these challenges appeared prevalent from the raw data alone. Obvious trends had emerged as a result of this open coding and once this process was complete, a table of percentages was drafted (Appendix 2). Further to this a visual chart was created, as there were 20 categories coming forward from the open coding, only topics with the higher percentages were labelled in this donut chart. A donut chart is used to show the proportions of categorical data. The three most prevalent categories of student need manifested as voice cracks (18.6%), loss of confidence (16.5%) and performance anxiety (13.4%). Followed by loss of higher range (12.4%), voice change (7.2%), dislike of own voice (5.2%) and difficulty pitching (5.2%).

As a visual aid this chart shows the more common thoughts and ideas of the students and the major trends can be easily accessed when viewed in this format. However, as only the higher percentages are labelled it can leave the reader without the full picture and wondering what is missing from the smaller percentage sections.



A full overview breakdown can be seen here, the total of students who gave similar answers and the resulting percentages.

	Total of respondents answers	Percentages based on 83 respondents
Voice Change	7	8.40%
Voice Cracks	18	21.60%
Performance Anxiety	13	15.60%
Loss of higher range	12	14.40%
Difficulty Pitching	5	6.02%
Loss of power	4	4.80%
Airy/rough Voice	3	3.60%
Loss of confidence	16	19.20%
Pain	2	2.40%
Lack of control	2	2.40%
Dislike of own voice	5	6.02%
Managing lower range	1	1.20%
Voice stuck up in nose	1	1.20%
Not much of a deep voice	1	1.20%
Vocal Fatigue	1	1.20%
Register transition	2	2.40%
Vocal range	1	1.20%
Vocal fluctuations	1	1.20%
Vocal timbre	1	1.20%
Throat clearing	1	1.20%

It is interesting to see here that all the answers gathered were relating to the changing voice or perception of voice. The question posed was "*Is there anything you find challenging about singing as you grow up?"* Yet not one response asked about something beyond this. For example, what repertoire to sing or how to remember lyrics, or perhaps performance techniques. It is noted that these participants are not necessarily singers in training but perhaps it can be argued that some unintentional bias has occurred by exposure to information prior to the data collection. The ethics consent form does outline the nature of the inquiry. Has the knowledge of the research area altered their ideas on what and how to respond perhaps? A member check (Lincoln and Guba 1985) was not carried out here, each individual participant it was hoped would bring their own perspective to the answers and as such there would be no fixed truth of reality, the originality of each response was actively sought. Despite this sought after originality, there were clear-cut patterns. The highest percentage response for this questionnaire was voice cracks (18.6%). Voice cracks most commonly occur during stage three of male voice change and it is during this stage that the voice is at its most

vulnerable (Trundle 2005). Often there is a lot of anxiety attached to this vocal unpredictability and whilst this is natural in the sequence of voice change it can be very unsettling for the voice user. Sweet (2020 p.128) identifies that these “vocal surprises are unavoidable, but not unembraceable” she furthers this with “when unpredictable vocal moments are embraced as a natural and inevitable part of voice change, student fear and trepidation are reduced”. The voice cracking and breaking is a perpetuated stereotypical indicator of male voice change and it is recognised that the collection of the gender of each respondent could have been conducted for this study. This was considered during the drafting of the questionnaire but it was felt that it could affect anonymity of female class members, as there is a large ratio of males per class at this school, and as such declaring gender may have made individual females identifiable. In retrospect this knowledge of gender would have provided further insight to these results, however it may not have altered the inclusion of this topic in the final resource. When cross referencing this with the data collected from the question *What content would you like to read in a magazine about how your voice changes as you grow up?* (Table 1) “Managing voice cracks” was requested by a large volume of participants (participants 4, 7, 10,12, 19, 32, 33, 36, 48, 50, 55, 58). It could also be argued that while this appears to be a popular topic perhaps it was the only thing students could think of to write. It is potentially the most obvious answer especially in a school where the ratio of boys is higher and male voice change symptoms present themselves in a more distinct audible fashion. Male voice change has long been a topic of research because of these dramatic acoustic changes, perhaps these students are responding to the most obvious symptom that they hear on a daily basis. However this does not undermine the inclusion of information on voice cracks being in the magazine, clearly this topic is certainly on the mind of the teenagers in question, experiencing voice change can feel embarrassing and exposing (Sweet 2020).

The second highest response was loss of confidence (16.5%). This was an anticipated result based on classroom observation and the aforementioned long absence of physical engagement with performance arts subjects during the pandemic. It should also be noted here that as adolescents develop during puberty they are conscious of

the invisible audience (Sweet 2020), this imaginary audience impacts their daily choices and desire to place themselves in vulnerable situations. Alongside this, performance anxiety was also a predominant answer (13.4%) again this could be linked with the unavailability of performance opportunities in previous years but can also be aligned with adolescent development and that often this fear of judgement can increase as students mature emotionally (Williams 2019). If we triangulate these responses with answers to the content requests (Table 1) information on confidence came from participants 13 and 26 and anxiety from participant 1. Looking at the percentages and the content figures, low self confidence and performance anxiety are dominant requests from this body of students. Common voice change symptoms like loss of higher range (12.4%), and difficulty pitching (5.2%) featured also here with voice change as an umbrella term for symptoms included in this stage of maturation pulling (7.2%) and remaining lower percentages of register transition, managing lower range, pain, air/rough voice, and loss of power all falling within this topic also. The indication is that students desire to access more knowledge on how their voice changes and this further validates the need for this representation in the resource. Again we should also consider the large volume of content requests from participants for this topic (participants 2, 3, 18, 20, 23, 25, 31, 45, 60, 62, 63, 68, 69, 71, 72, 75, 76, 78, 80, 83).

There were some extremely honest answers of students disliking their own voice (5.2%), with one response stating they would like to know more on "*I guess voice therapy? because of my gender and such"* (participant 52). We may contemplate again the results and the lack of data information on male female ratios to these responses. Perhaps this dislike of their own voice stems from the acute change that males experience during this time (Cooksey 1984), perhaps it comes from girls who can experience a loss in power and confidence (Gackle 2011), perhaps it comes from a perception of how their voice should sound because of societal beliefs (Sweet 2020). Detrimentally we do not know if this feedback comes from males or female students and the data cannot be further compared or analysed through this lens. However, it can be argued that this type of comparison may be becoming obsolete as we move towards a greater appreciation and understanding of the whole voice and gender fluidity. The lack

of these male/female participant figures drives the analysis and reflection on this data in this forward thinking direction, which may well benefit the outcome of this study (Sweet 2020). We do not strive to compartmentalise voice as male or female, therefore perpetuating vocal stereotyping in regards to vocal change being driven by strict conventions. Inclusion of what the students want from this research is paramount so in analysing the answers from questionnaire 1 attention has been given to content requested and then combined with what they think they need to create and ascertain the big picture.

	Total of respondents answers	Percentages based on 83 respondents	Requested Magazine Content
Voice Change	7	8.40%	Managing Performance Anxiety
Voice Cracks	18	21.60%	How does your voice change?
Performance Anxiety	13	15.60%	Managing voice cracks
Loss of higher range	12	14.40%	Why can't you keep a steady tone/pitch
Difficulty Pitching	5	6.02%	Building confidence
Loss of power	4	4.80%	How to sing high
Airy/rough Voice	3	3.60%	How to sing like Ariana Grande
Loss of confidence	16	19.20%	How deep will my voice get?
Pain	2	2.40%	Singing can be hard and challening
Lack of control	2	2.40%	Why can't I feel confident?
Dislike of own voice	5	6.02%	Why does my voice hurt?
Managing lower range	1	1.20%	Why does it sound different on a computer than it does in my head?
Voice stuck up in nose	1	1.20%	How to keep a healthy voice
Not much of a deep voice	1	1.20%	How do we produce sound?
Vocal Fatigue	1	1.20%	Voice change and celebreties - damage
Register transition	2	2.40%	Inspirational singers
Vocal range	1	1.20%	Changes you experience during puberty
Vocal fluctuations	1	1.20%	Standard voice ranges SATB
Vocal timbre	1	1.20%	Basic vocal technique
Throat clearing	1	1.20%	A graph that shows the changes in pitch

(Table 1)

The table above presents the data in its most concise form and allows at a glance an understanding of where these needs and requests fall. We are able to identify the main aspects, those shown with the highest percentage and correlate these with requests for content when reflecting on and considering magazine content and design. Kirk (2007) has highlighted methodological issues relating to different cultures of youth and the heterogeneity of childhood however it is felt that the data collated here can be considered a true sample of how students are feeling right now at this point in time.

Participant 67 states they have no interest in singing and that they wouldn't read a magazine about the voice, this open honesty may well show they are not concerned with how this will be received by the teacher. Participant 40 also adds to this perspective with their comment "I don't know" in regards to what they would like to read. Students are emerging from online learning, they have not had music lessons or been singing, they have not been in an educational environment where their own voice has been exposed to the opinions of the teacher here.

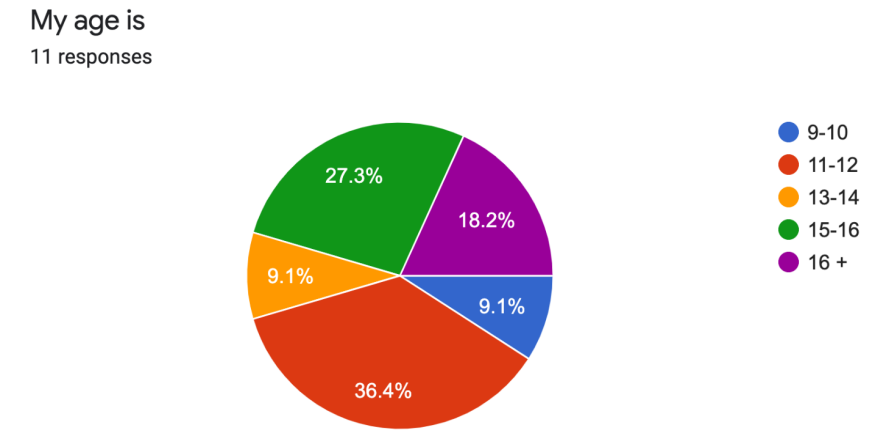
From this data a list of content was drafted to feature the following as a starting point:

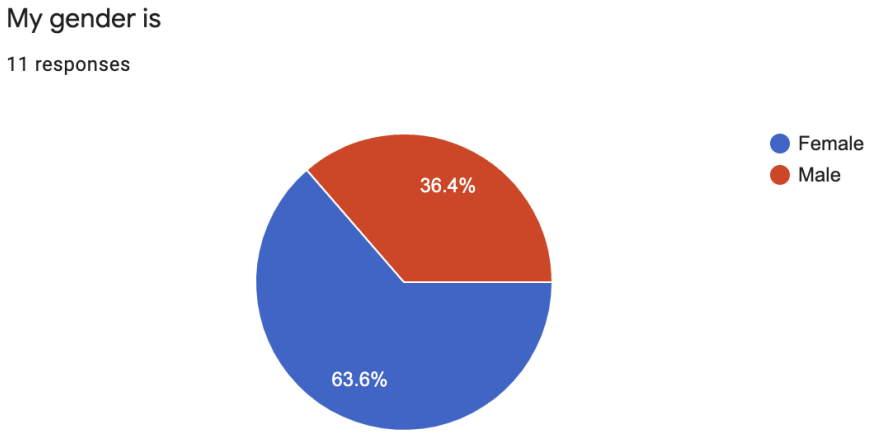
- A front page.
- Contents Page.
- Celebrities who have suffered vocal damage.
- Raw quotes from the research data.
- How the voice functions.
- Male & Female Voice change.
- How to sing like Ariana Grande.
- Voice Cracks.
- How to keep the voice healthy.
- Why does the voice sound different to how we think it does when we hear a recording?
- How to be more confident and less anxious when performing.

What content would you like to read in a magazine about how your voice changes as you grow up?	Is this content featured in the magazine?	Where is it represented in the magazine?
Requested Magazine Content		
Managing Performance Anxiety	Included	How can I feel more confident and less anxious about performing?
How does your voice change?	Included	Let's talk about how to keep singing as your voice changes
Managing voice cracks	Included	Voice cracks and how to keep your voice healthy
Why can't you keep a steady tone/pitch	Included	Let's talk about how to keep singing as your voice changes
Building confidence	Included	How can I feel more confident and less anxious about performing?
How to sing high	Not included	Will be included in second magazine
How to sing like Ariana Grande	Included	How can I sing more like Ariana Grande?
How deep will my voice get?	Not included	Will be included in second magazine
Singing can be hard and challenging	Included	Let's talk about how to keep singing as your voice changes
Why can't I feel confident?	Included	How can I feel more confident and less anxious about performing?
Why does my voice hurt?	Included	What happens to my voice as it gets older?
Why does it sound different on a computer than it does in my head?	Included	Why does my voice sound different to what I think on a recording?
How to keep a healthy voice	Included	Voice cracks and how to keep your voice healthy
How do we produce sound?	Included	How does your voice work?
Voice change and celebrities - damage	Included	Celebrities who have suffered damage to thier voice
Inspirational singers	Included	Celebrities who have suffered damage to thier voice
Changes you experience during puberty	Included	What happens to my voice as it gets older?
Standard voice ranges SATB	Not included	Will be included in second magazine
Basic vocal technique	Not included	Will be included in second magazine
A graph that shows the changes in pitch	Not included	Will be considered

This table shows the correlation of topics in relation to student requests.

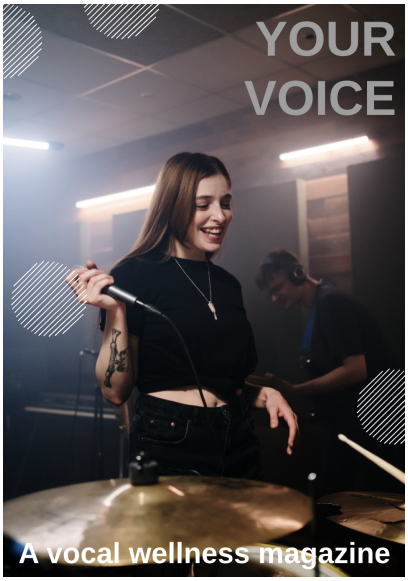
From these results a digital draft magazine was drafted. This version of the digital magazine was then presented to a selection of students for feedback. Students who participated in the initial survey were approached so that they could see the way in which the first research had been developed. There were 11 participants representing a mixture of males and females, 4 males and 7 females across a range of ages from 9 - 18 years old.





This research activity took students a longer amount of time to complete and as such it proved more complicated to recruit participants that would fully complete the form. Information was collected on gender and age along with thoughts on the image, font, layout and content of each page. The research garnered from this second wave of student response is presented here beside images of the corresponding magazine page for reference.

Front Page:

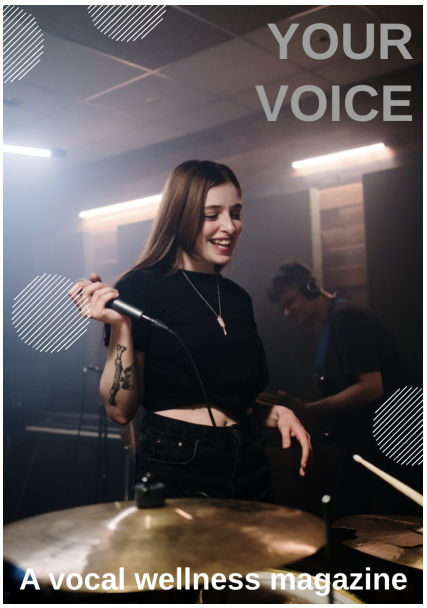


Entitled “Your Voice" it was hoped that this would represent the content of the magazine and further inform the reader that this is a resource designed using the voice of the students throughout the research process and action research cycle. The sub-title “A Vocal Wellness Magazine" is included here to give readers further insight into its contents and purpose. The colours, and fonts for this page were chosen to be subtle and to fit in with the image of the young lady on the cover. This contemporary image was selected to give a fresh and age appropriate feel to the magazine, the female was also modestly dressed for our muslim students but the image still displyed tattoos and modern fashion.

My gender is	My age is	Front Page - Please give your thoughts on the image, font and layout of this page.
Female 1	11-12	The font was easy to read and nice looking, the image was high quality and it looked appealing the layout was easy to look at and simple to understand. All of it was very good and looked very attractive
Female 2	15-16	The front page has a very professional magazine cover look but the text can be bigger and use more pop/bright colors. A blurb to the magazine would be nice. The color scheme of the contents page pops out and to improve it bullet points could be added to every title on key points the chapter consists off.
Female 3	15-16	I like how simple it is it seems very elegant, but the bottom words "a vocal" and also the "a mag" (in "a magazine") get kind of lost in the white background (reflection on the cymbal and the drum)
Female 4	9-10	I think it was really good I was able to read it.
Female 5	11-12	Change the image and where the text of "A vocal wellness magazine". Maybe change the image to some famous celebrity singing or a performance/concert. The text could be in the middle and different color. The font is pretty good and the decorations, but maybe put a description + table of contents of the magazine at the side.
Male 6	11-12	So I love the design of this front page because the image is basically people having fun which is a good thing while also trying to make music. just one thing is the font it would be better if it would have like some music notes.
Male 7	16 +	I love it! Maybe we could change of "A vocal wellness magazine" to something in capital letters to make it seem more emphasized.
Male 8	11-12	I like the front page a lot, it is attractive with bright colors, I think that the words YOUR VOICE can be made white as then it would show better, I also think that the words, your voice can be made bigger, focusing on the title of the magazine.
Female 9	16 +	I really like the image; high quality, nice composition. In my opinion, the font in the top right should be more bolded than the bottom text.
Female 10	15-16	Its good, though i think with the general colour scheme of the content inside the magasine, it clashes a bit, but for the over all idea, its good.
Male 11	13-14	As the font is very common, maybe a musical font like "Amadeus", "Symphony in ABC" would give a more musical vibe. I really like the image on the front page, maybe there could be a singer on the front page.

There were challenges here working the magazine titles against the flare from the strip lights in the image and neutral colours were chosen to suit the photograph palette.

The cover page received a range of feedback which on the whole was largely positive. The image was perceived to be “high quality”, “very professional”, “very elegant” and “attractive”. There was only one suggestion from Female 5 to change the image to someone famous and as this presents copyright issues in securing a high quality image and also given that only 1/11 people requested this, the image will remain unchanged. There was however a lot of feedback for improvement on the font and colours used. Female 2 requested bigger text with the use of more pop/bright colours. Female 3 identified words getting masked in the reflection of the drum kit. Female 5 asked for text in the middle and the use of a different colour. Male 7 wanted to change “A vocal wellness magazine” to have more emphasis, perhaps capital letters. Male 8 requested the font in white, Male 11 felt the font itself was very common and suggested the use of a more musical style. Other younger students were keen to feature more of a musical flavour too, with the addition of musical notes (Male 6).



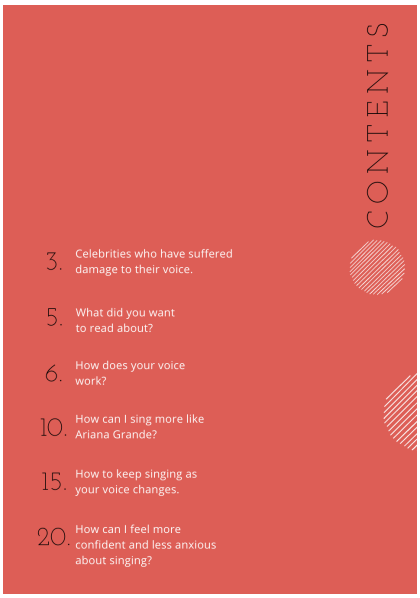
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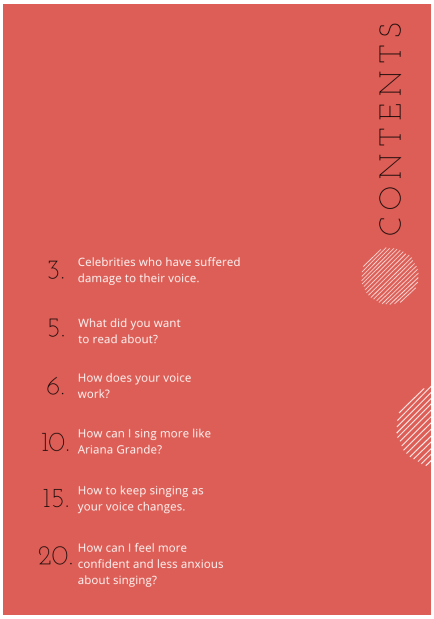
Published Edition

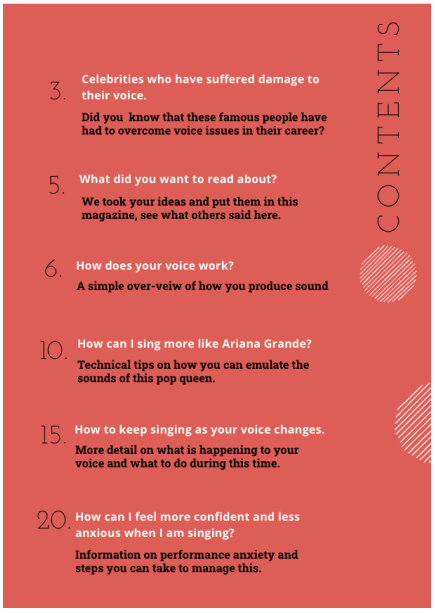
On the right here you can see the changes made to the front cover, a repositioning of the main title with a change in font, position and colour. The colour is taken from the following contents page to add consistency. “A vocal wellness magazine” has also been raised to a more prominent position where it is no longer visually distorted by the image.

Contents Page:

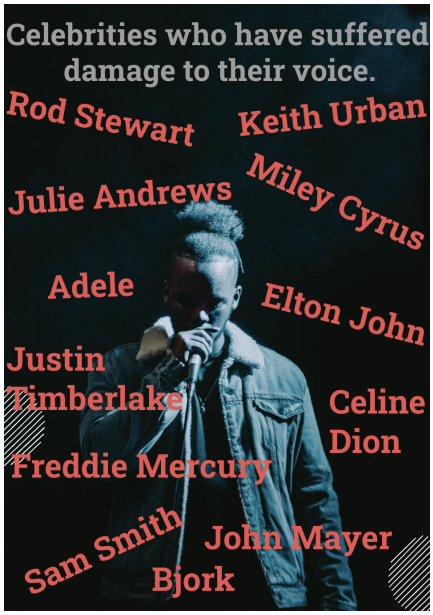


In contrast a bright and captivating colour was chosen for the contents page so that it would stand out and feel fresh, new and exciting. The decision was taken not to list every single item in the magazine, just an appropriate selection that would potentially engage the reader. It was felt that a full list of contents was not absolutely necessary, especially as a lot of the information presented was across a two page spread. The fonts and colour were chosen to complement the contemporary brief of the magazine. There were some unprompted responses from Female 2 during the data collection, she suggested some bullet points being added to the titles with key points of that chapter, also from Female 5 who made suggestions for a more descriptive element here. A decision had been made to not include feedback for the contents page to keep the second questionnaire shorter, it was not deemed crucial as it did not contain any voice specific learning, yet these students still felt they wanted to give feedback on this section. As a result changes were made and these are shown below in the draft and published edition images. You can see here the application of the student feedback with the addition of mini overviews of what the pages include and slight changes to font size and colour.





Celebrities who have suffered voice damage:



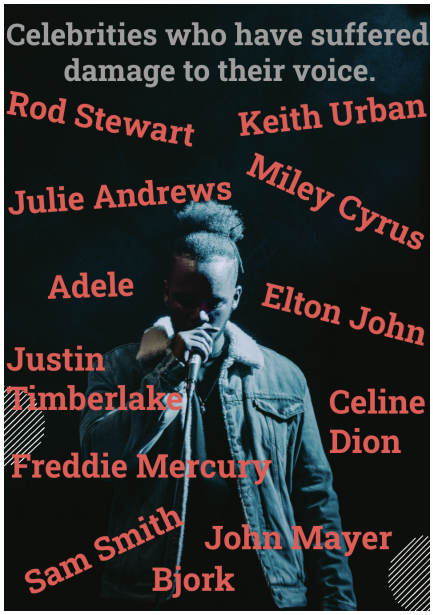
This content was requested by participant 59 and was perceived to be a fitting way of communicating to young people that many of us have challenges with our voice and that celebrities are no different. Given the iconic status of these examples it was felt that the inclusion of this information would be an interesting way of students potentially connecting with the idea that we are all at risk of voice damage but that it does not need to stop us from reaching our goals. The bright colour from the contents page was taken into the titles here combined with the grey from the front page and an image of a male singer was used in order to represent both genders early on in

the magazine. Information on content was taken from an entertainment magazine website article written by Andera Wurzburger (2019).

The following data was collected for page 3 *Celebrities who have suffered voice damage*.

My gender is	My age is	Page 3 - Celebrities who have suffered voice damage. Please give your thoughts on the image, font, layout and content of these pages.
Female 1	11-12	The content was informational, the image was relevant and high quality it looked good. The font and layout looked nice together and the layout made it all look better.
Female 2	15-16	Instead of the grey colored title, white would pop out more. I think it would look better if the names of the singers do not overlap on the image. The content is pretty eye opening since I would've never thought that these singers EVER suffered any voice issues. The image of the singer adds to theme of the magazine!
Female 3	15-16	I I like the colour and the font of the text and how they are laid out around the silhouette
Female 4	9-10	Maybe the background could like connect to the names more.
Female 5	11-12	Remove the contents page and use those two pages for the celebrites who have damged their voices. Use the 1st page as bullet points and list the celebrites who have damaged their voice then in the 2nd page put a collage of the celebrites.
Male 6	11-12	so this is a very good page and the picture matches the sadness of the people who had suffered from voice damage and the layout is matching the theme and the font suits it!
Male 7	16 +	I like the table of contents. With reference to the layout of celebrities who have suffered vocal damage, maybe you could keep the font the same to keep the same theme. In addition to that, the way they have put randomly is nice but maybe make them a bit smaller?
Male 8	11-12	I like this slide, too, the red goes well with the black background, but once again, I feel that the title can be made clear with a color that is bright and instead of grey, I personally feel that a white would suit the background better, I think that this page is very nice overall, the content is straight to the point and clear, the layout is also very nice, but I feel like this page is a little cramped up, there are about 12 vocalist names, I feel that around 8 vocalist names would be enough.
Female 9	16 +	Maybe the text sizes could vary, it feels a bit crowded; maybe some of the texts can be larger than others (for example the more popular artists' texts are more enlarged). The use of red is really nice and I like how it matches with the second page.
Female 10	15-16	I dont quite understand the layout, where the other pages have almost all 2 page spreds, this one only apears to be one, its aesthetically pleasing, but again, it seems sort of out of place... Maybe make the contents page a double, and then something like the celebrities one, to be a double on the next page
Male 11	13-14	The names on the page make the page looked packed, maybe it can be organized in a way and the names could be smaller to increase the space.

Regarding the information displayed on this page, students commented that it was “informational” and “eye opening”, and the image was also positively received. The main point of focus here was on how the information was presented. The names were seen to be too close together, “cramped up” “over-crowded” and “packed”. Requests were made for use of similar fonts and colours to the contents page and to perhaps expand this feature to a two page spread in keeping with the following pages. This feedback was actioned with a stripped back feel, smaller titles with the same font and colours being used from the contents page. The overall feel of the page becomes more sleek without the loss of any celebrities' names.



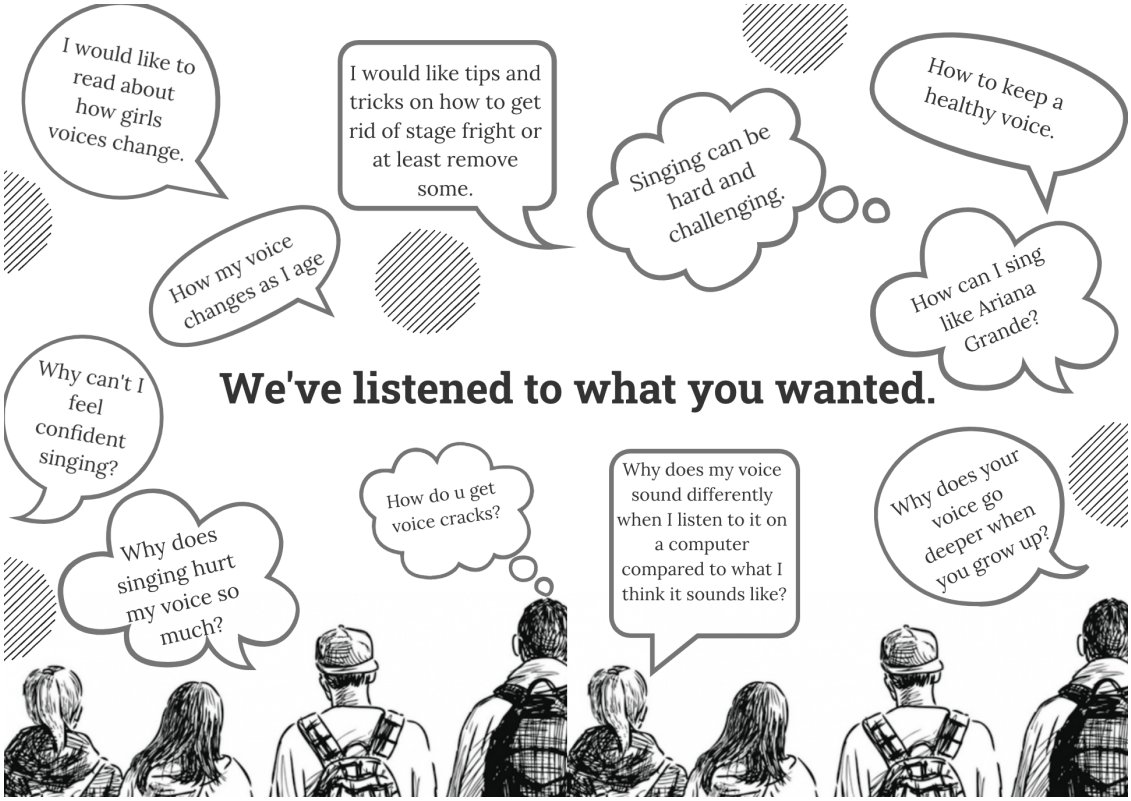


We've listened to what you wanted:

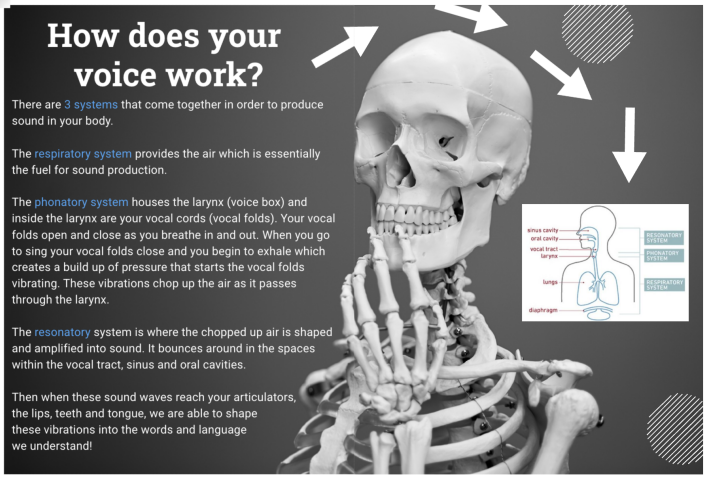
My gender is	My age is	Pages 4/5 - We've listened to what you wanted. Please give your thoughts on the image, font, layout and content of these pages.
Female 1	11-12	The image was very high quality and looked attractive. The font looked appealing with the image and the layout was very nice and it was extra nice touch.
Female 2	15-16	The figure of the last kid on page 4 is cut off, it would look more cohesive if we can see the rest of him on page 5, giving the appearance of a row of children. This page sets out the layout for the contents of the magazine and what to expect so that is pretty informative. I also love the aesthetics, speech bubbles and grey and white font theme, which is a pause from the red's and black's used earlier.
Female 3	15-16	I like the monochrome theme and all the different shaped speech bubbles and all the line circles, everything is clear and easy to read
Female 4	9-10	I think the things you added are thoughtful and really good. Good job Ms. Zita :)!
Female 5	11-12	It's really good I swear to god, I don't think you'll need to change anything.
Male 6	11-12	For this page I think this is a very good idea because these questions have been here with me for a while and it also tells the person that the questions will be answered. The image is good because there are lots of people there and the font is good because it's readable and the layout matches the image by making it go all around with the people
Male 7	16 +	This page is really pretty, I like the layout.
Male 8	11-12	I really like this page, the images of the people is actually very nice and realistic, however, when the pages split in half, a boys image is just done halfway through, I think that this makes the image kind of different from the rest, and I really think that the pages would look aesthetically better if this image was corrected, the fonts are pretty good too, the layout is also nice as the speech bubbles are spaced out properly, and the content is also good.
Female 9	16 +	I love this page, the bolded text in the middle is very effective in engaging the audience. I also like the different text box designs. The quotes are also engaging I don't think any changes need to be made (this is my favorite page)
Female 10	15-16	i like it, its pretty, its almost completly sumetrical, and has a good colour scheme, i like, it alot :]
Male 11	13-14	I like the speech bubbles pointing to a bunch of people to deliver the purpose of the page. The background color also makes sense.

This table shows the data collected from "We've listened to what you wanted". As the magazine is designed from the responses of students it was felt necessary to include this raw data in the magazine for students to see. So they could know that they had been represented here and so they could see the similarities and differences in the

range of responses, many students sighted the same challenges. The only constructive feedback from participants was regarding the layout and the way the image of the boy on the right is cut off (Female 2 and Male 8). This was a software issue and couldn't be resolved due to the format being spread across two pages whilst the same image is repeated. The students appeared to really relate to this page and to appreciate the inclusion of their ideas as the evidence of the starting point of this resource. Responses included, "it tells us what to expect and it's pretty informative", "I think the things you have added are thoughtful and really good", "It's really good I swear to god you don't need to change anything", "I really like this page", "I love this page", "I like it alot", As such the page will remain unchanged and is displayed here in it's unchanged draft and published edition.



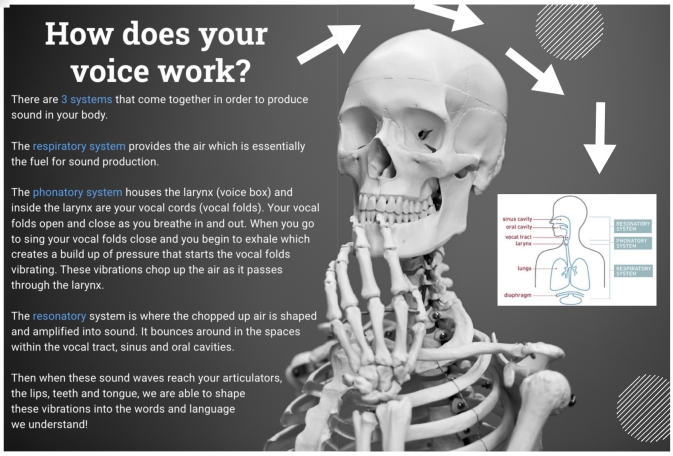
How does your voice work:



Moving forward from this point in the magazine design it made chronological sense to start by answering “how does your voice work” to enable a deeper understanding of voice change before moving onto more complex vocal understanding. This double page spread was kept simple and free from over complicated wording. Basic information on the respiratory, phonatory and resonatory systems was provided. The image of the skeleton was selected for comic and scientific effect, with arrows taking us to a more detailed diagram of the systems including sinus and oral cavities, the lungs and the diaphragm. Colours were kept to a minimum here to create more of a monochrome design with the use of blue on more important words to draw the reader's attention. The result of student opinion appears below.

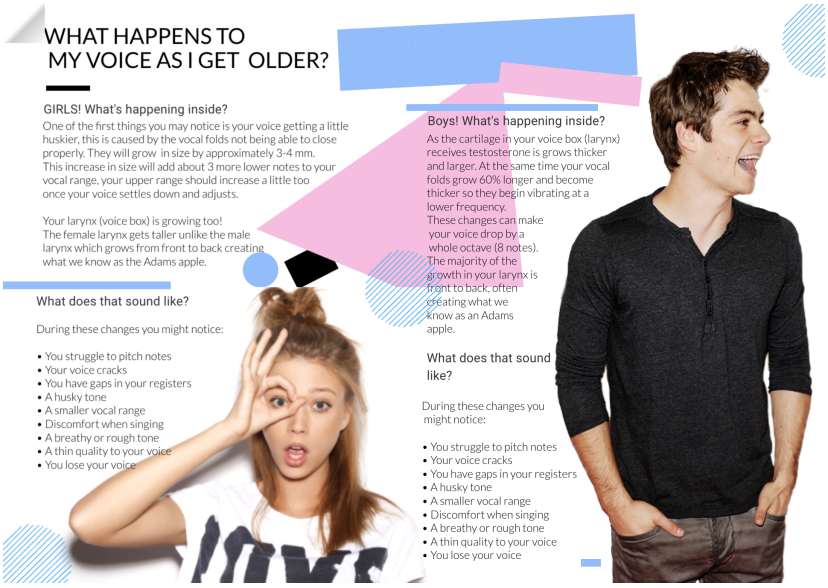
My gender is	My age is	Pages 6/7- How Does Your Voice Work? Please give your thoughts on the images, fonts, layout and content of these pages.
Female 1	11-12	The content was informational and it was presented in a nice way. The font wasn't really mixing well with the great image and it was a bit hard to read as I got quickly distracted.
Female 2	15-16	To start of with the white bored adds a cool effect to the magazine. The font of the title, in my opinion should be different to the font of the rest of the texts to separate it from it. Maybe using red/blue color for the title. The image of the skull with its skeleton hand resting on its chin is funny and I like the fact that the scientific terms are colored blue, different from the rest of the text. Overall content of the page, is informative and easy to understand. To develop the aesthetics of page 7, it is possible to make the image on the right have a transparent background so it mixes in with the rest of the page.
Female 3	15-16	i like how all the key words are highlighted in blue and hoe the text is broken down into 5 sections, i think the diagram on the right could have a border or maybe rounded corners to match the circles
Female 4	9-10	It was really really ……. good
Female 5	11-12	I like the text and where you put the images but I think it would be better if you remove the image where they show the person's vocal chords. The text in that image can be put like inside the skeleton.
Male 6	11-12	I think that the image should have been someone that is either singing or something that shows the vocal cords but the layout is good because it is easy to read and so is the font.
Male 7	16 +	This page is nice as well.
Male 8	11-12	I think that these two pages are pretty good, one tiny issue in page 7 is that the diagram of the mouth, esophagus, etc., is very unclear, as I am not able to see the diagram clearly even when I zoom in, apart from that I really like the content and the layout, the font is also very nice, The image of the skeleton is very nice.
Female 9	16 +	The layout is organized, the text format is well laid out. "resonatory system" the "system" should be in the color blue as well to add consistency with the other blue-colored texts. maybe the diagram could be a bit larger?
Female 10	15-16	this one is also good, its formal, and keeps me wanting to look at it more, and read about it, its aesthetic, and the dull colours match with the page before, while still keeping up with a modernised look, and able to match any other colour scheme
Male 11	13-14	I like the skeleton included and I like the diagram. However, I feel there is lots of information included. Maybe it should be concise.

The students were a lot more vocal here on what they thought could be improved, overall the main points were regarding the layout but the content was viewed as being “informational”, “informative”, “really, really good”, “wanting to look at it more and read about it”. One Male (11) felt there was a lot of information and wanted it to be more concisely represented. There was lots of feedback regarding the fonts “not mixing well” “title font should be different”, and the image displaying the vocal system not being clear enough. By removing the image displaying the systems and by replacing it with labelling the actual skeleton as suggested by female 5 and adding extra blue elements to the text which was commented on by female 9 the overall result appears to be a clearer presentation of the information. The page is less full and the elements work more cohesively to present the information which in itself is quite wordy and dry.





What happens to my voice as it gets older?:



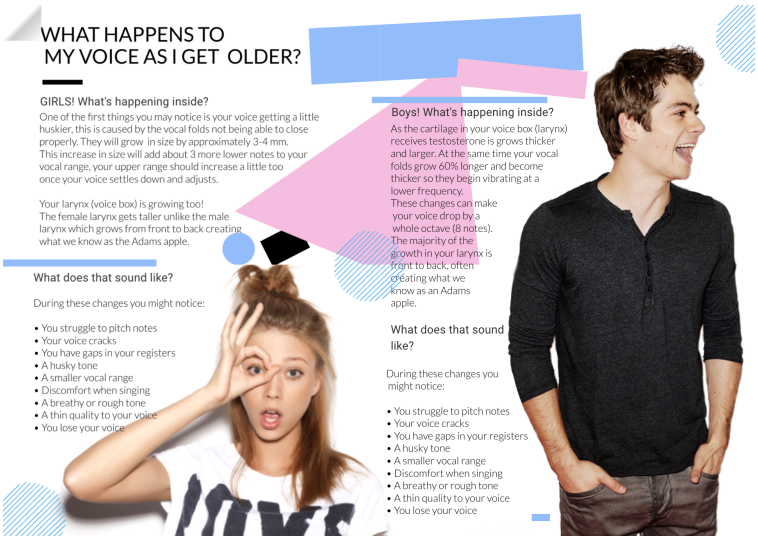
Following on from this it felt logical to give information on female and male voice change; this was a heavily requested topic and needed to be addressed in an informative yet accessible way. Changes in both female and male voice were

shown side by side here to demonstrate that much of what is happening for one gender is also happening for the other. It was a choice for readers to see this information presented together as for so long the emphasis has been on male voice change and the female has been overlooked (Gackle 1997; Sweet 2020).
The images and colours used here tie in with a youthful and vibrant feel, information was kept relatable with the use of friendly sentence structure and when appropriate bullet points were applied for emphasis and succinct displaying of pertinent information. The thoughts on this page are displayed in the table below.

My gender is	My age is	Pages 8/9 - What Happens To My Voice As I Get Older? Please give your thoughts on the images, fonts, layout and content of these pages.
Female 1	11-12	The content was presented nicely, neatly and it was very informational. The font was different than the image and it was very neat-like and tidy and very nice looking. The high quality image matched the amazing layout.
Female 2	15-16	I love the geometric shapes, patterns and colors of this page. The 2 models also had a fun atmosphere to the magazine, rendering it a teen magazine. Just moving that one striped circle away from the text will make it easier to read. In the girls side of the content, I did not understand the last bullet point that much, maybe it was the word choice. Since "the what does that sound like" is the same for both girls and guys, they could be merged together. I think many teens can relate to the differences listed.
Female 3	15-16	i really like the shapes and the colours in the middle they look really cool, i also like how the different sections are broken up with the blue line and the layout of the images, i think another black shape could be added to the pink/blue shape area int he middle because there is only one little black rectangle that looks a bit out of place
Female 4	9-10	You explained everything very well … I think so……
Female 5	11-12	The page in genral is perfect but the text color should be changed to a more clearer color since when you describe what's happening in the boys section the pink makes it lighter and it doesn't let you see the text well.
Male 6	11-12	This is a really good page because most people wants to know this and it strikes to the teenagers or the kids hitting puberty. The image matches because it shows pink and blue which represents boys and girls. The font is matching but needs to be a little bigger because some people would have to squint to read but the layout is perfect
Male 7	16 +	Maybe more diversity in terms of pictures of people on the page, we need somebody to possibly relate to.
Male 8	11-12	I really like how there is one page for each gender, this page really describes what happens to the voice, however, only when zoomed in can the font be seen clearly, I feel that the part where there is something called: during these changes you might notice, I think that this can be something that is like put together for both the pages, I feel that this can be something for both pages together, and only one list of things.
Female 9	16 +	to avoid repetition, since the "during these changes you might notice:" list for both boys and girls are exactly the same, you could just keep it to one list and apply it to both genders. and maybe the "during these changes" list could go on top, before the explanation behind the changes. for example the subheading could be "as you get older, you experience these changes in your voice:" and then follow that by giving the scientific explanation behind it. (maybe is more engaging) also very very small detail but capitalize "BOYS!" to match the capitalized "GIRLS!" :)
Female 10	15-16	Its good, very teen magasine, and suits the audience, while still ebing informative. the format is good, and everything, yes.
Male 11	13-14	There is lots of information which can educate people about voice changing. I like how there is information for girls and boys.

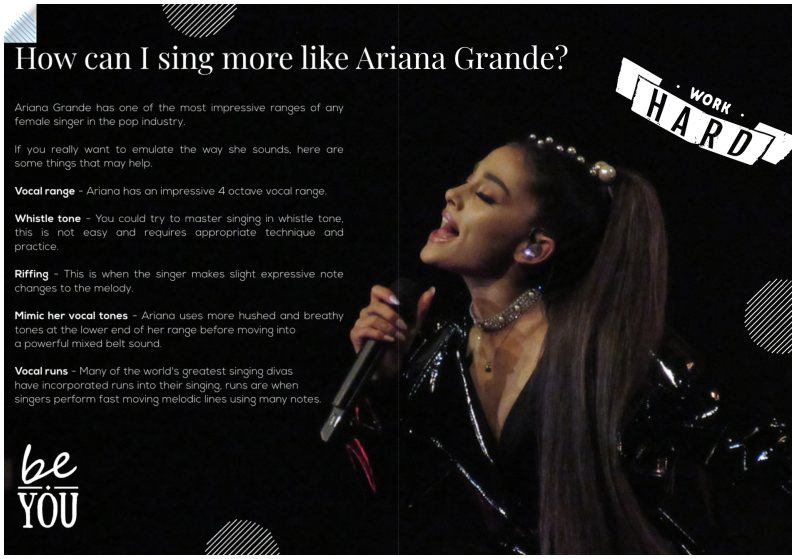
There was a lot of positive feedback on the concept for this page and how it read to be designed for “teens”. Male 11 commented “there is lots of information which can educate people about voice changing”, female 10 noted that it “suited the audience while still being informative” Male 6 said “this is a really good page because most people want to know this”. The main point for concern was the repeated information for males and females on both pages and the font choice being small and illegible. Female 2 made a comment that she did not understand the bullet point “You lose your voice”. When considering this observation it should be taken onboard that the students at this institution are international students. Therefore, more colloquial terms may not be understood. In reality the voice is not lost, it is just unable to function properly. This will therefore be changed to “Your voice doesn’t make sound”. There has been no loss of

information here, only re-formatting and alterations to the wording of voice loss to be more internationally understandable. This minor comment has been a catalyst for further reflection in view of terminology used during teaching. How often may this be a barrier to knowledge and understanding of our international students and to those where English is not their first language. Singing terminology can be scientific and a little unreachable. As voice practitioners we may endeavour to demystify what is going on inside the voice with explanations but in reality we may be mystifying students further with the language we use.





How can I sing more like Arianna Grande?:



Participant 17 specifically requested content on how to sing like Arianna Grande so this was included to add relatable depth and vocal technique specific information. A free, creative commons licensed image was selected and again like pages 3 - 4 a monochrome feel was given to this

double page spread with the inclusion of motivational and inspirational words, “work hard” and “be you” to give these pages further depth and relevance to a younger audience Sweet (2020 p.61) advocates for the benefits of mantras in helping develop a “strength from within”. Information on Ariana’s singing style was taken from beomesingers.com (Mann 2022).

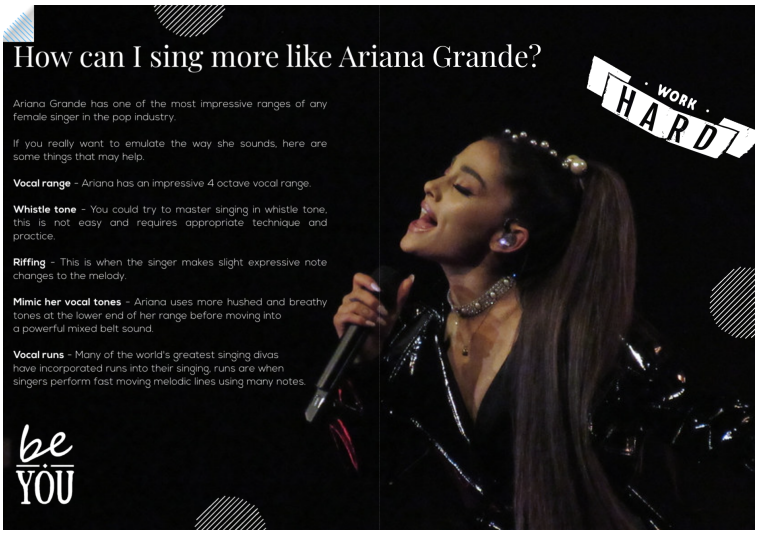
The thoughts of students on this page can be read below.

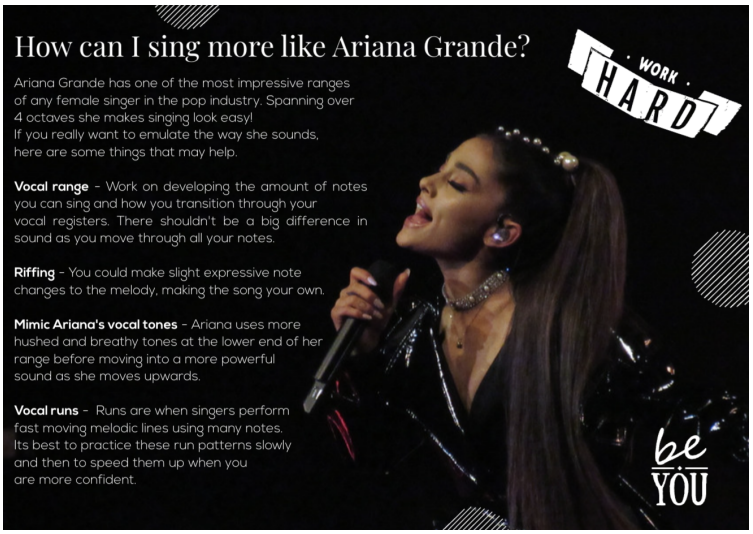
My gender is	My age is	Pages 10/11- How Can I Sing More Like Ariana Grande? Please give your thoughts on the images, fonts, layout and content of these pages.
Female 1	11-12	The content was all facts and no opinions but it didn’t really answer the question. The layout matched the amazing very high resolution image. The font matched everything and made it look extra pretty and neat.
Female 2	15-16	Ariana Grandee!! I love the black and white motivational text and the page looks really eye-catching. I do not know that much about singing terminology, so I did not understand some words, like riffing and vocal run and would be nice to explain in greater detail.
Female 3	15-16	i really like the image and the white text on black, i think the "BE YOU" at the bottom could be moved to the right a bit so it's in the middle of page 10
Female 4	9-10	Good……(I want to be my own person thou……..). P.S. I think you should do something like this for the male side of things so they don’t feel left out :).
Female 5	11-12	I love that you put this page litreally I am a hugeeeee fan of Ariana so thank you for putting this page now I actually know how to sing like her or more like her, it is PERFECT.
Male 6	11-12	So this strikes more to the girls because most male singers wouldn’t want to sing like her. The image matches because it’s Ariana Grande and the layout is nice because it doesn’t block the singer herself and the font matches the background
Male 7	16 +	This is my favorite page, love it!
Male 8	11-12	I really like the background and how this slide has been made, however the layout can be made slightly better as I feel that the layout is a little bit too spaced out so I feel that the sentences should not be spaced out so much, apart from that the content can be a little more in depth, as some people may not know what whistle tone is.
Female 9	16 +	this page is really interesting and i thiink a lot of people will be interested in the different techniques she uses. maybe you could specify her vocal range (the specific notes). maybe also expand more on what a whistle tone is.
Female 10	15-16	I feel like you should probably say why its impressive that areana grande has that range, why would you want it etc. but in terms of looks, its pretty.
Male 11	13-14	The black background with white text is very attractive because of the contrasting. The picture of Ariana Grande looking towards the picture is very logical.

Interestingly there was a great deal of feedback on this page in terms of the vocal information presented. Female 1 felt it was “all facts and no opinions… didn’t really answer the question”. Female 2 “I do not know that much about singing terminology so I did not understand some of the words”. Female 9 wanted specifications of her actual vocal range and thought “maybe also expand more on what whistle tone is”. Female 10 echoed this with “I feel like you should say why it’s impressive that she has that range”. It is worthy to note that this feedback came from students across the age ranges and that understanding was not necessarily clearer for the more mature participants. Female 4 acknowledged that perhaps there should be a similar feature that would attract more to the male readers, something which had not been considered. However Male 7 did comment “this is my favourite page I love it!”

Greater detail has been added to the vocal information here in order for it to be easier to understand and the wording and content aims to answer the question more fully as

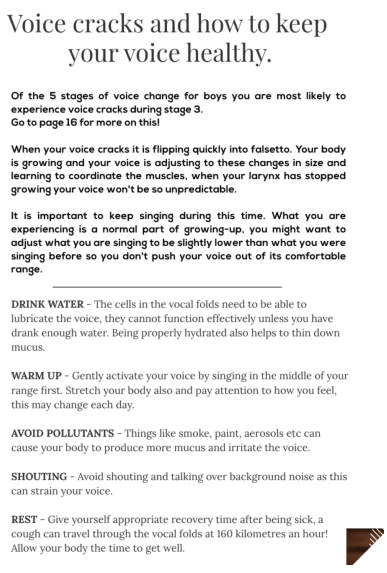
requested by Female 1. The font size has also been increased to improve the layout of this page. The sentence on whistle tone has been removed as this is a complex vocal technique which cannot be described in enough detail succinctly here and poor understanding of this technique could lead to voice damage.





Voice cracks and how to keep your voice healthy:





Voice cracks and how to keep your voice healthy.

Of the 5 stages of voice change for boys you are most likely to experience voice cracks during stage 3.
Go to page 16 for more on this!

When your voice cracks it is flipping quickly into falsetto. Your body is growing and your voice is adjusting to these changes in size and learning to coordinate the muscles, when your larynx has stopped growing your voice won't be so unpredictable.

It is important to keep singing during this time. What you are experiencing is a normal part of growing-up, you might want to adjust what you are singing to be slightly lower than what you were singing before so you don't push your voice out of its comfortable range.

DRINK WATER - The cells in the vocal folds need to be able to lubricate the voice, they cannot function effectively unless you have drank enough water. Being properly hydrated also helps to thin down mucus.

WARM UP - Gently activate your voice by singing in the middle of your range first. Stretch your body also and pay attention to how you feel, this may change each day.

AVOID POLLUTANTS - Things like smoke, paint, aerosols etc can cause your body to produce more mucus and irritate the voice.

SHOUTING - Avoid shouting and talking over background noise as this can strain your voice.

REST - Give yourself appropriate recovery time after being sick, a cough can travel through the vocal folds at 160 kilometres an hour! Allow your body the time to get well.

Information on voice cracks and healthy voice production were combined together on this page to encourage readers of both genders to engage with the information. The image of water cracking was chosen to give a fresh feel to the feature but also to add emphasis to the need for adequate hydration in vocal health. Information was kept brief and applicable to both sexes with the

omission of references regarding the effect of the menstrual cycle and alcohol on the voice due to the social conventions of Oman. This could have been included but a choice was made that it wasn't wholly necessary in this first edition and could be included in greater detail in later editions. Facts were presented in short accessible chunks.

Student responses to the design and content of this page follow.

My gender is	My age is	Pages 12/13 - Voice Cracks and How To Keep Your Voice Healthy? Please give your thoughts on the images, fonts, layout and content of these pages.
Female 1	11-12	The content was helpful, and the fonts, images, and layout matched each other looked very nice and tidy.
Female 2	15-16	I love the content of this page it is so simple yet helpful. The layout is clutter free but it would be better to use another image one that includes more of the points mentioned such as image of water, and someone singing or a negative image with someone yelling/smoking to portray what not to do.
Female 3	15-16	i like how the font changes between the two section and how the two sections are separated i also like how the blue image gives a pop of colour
Female 4	9-10	Helped a lot
Female 5	11-12	I like the text in this page but the image doesn't really make sense, maybe you could change the image to a microphone or something related to singing.
Male 6	11-12	This page is perfect because young singers don't know what they should do to keep their voice healthy. The image is questionable because it doesn't match what their talking about but the font and layout is good because it's readable and isn't blocking the image.
Male 7	16 +	This is a good page, no suggestions :)
Male 8	11-12	I really like these pages, but I think that instead of just the blue on page 12, there can be information on that page, I think that more imagery would make these pages better, the content and the layout however is really good. I really think that the blue background on page 12 would actually be better on page 13
Female 9	16 +	really nice page, i like the image, gives a calming effect, adds to the "healthy" tone
Female 10	15-16	I dont understand the relevance of the photo, however, it does look nice in contrast to the other slides, but not the slide before it.
Male 11	13-14	The solution as really useful and do help me at time when my voice cracks when I sing. The picture communicates cracks, but at first looks it does not make sense.

The image used on this page drew a lot of perspectives from the students. Female 2 felt the use of another image would be better, she mentioned the use of an image of water, which this image actually is. She also proposed the use of a negative image perhaps portraying what not to do. Female 5 also felt that "the image didn't make sense" suggesting the use of something related to singing. Also Male 6 found the image "questionable because it doesn't match what's being talked about". Male 8 also requested the use of more imagery and Female 10 said "I don't really understand the relevance of the photo". Female 3 liked "how the blue image gives a pop of colour" and Female 9 also liked the image while Male 7 stated "This is a good page, no suggestions". In regards to content it was deemed 'helpful', "simple yet helpful" "helped a lot", "this page is perfect", "solutions are really useful".



Voice cracks and how to keep your voice healthy.

Of the 5 stages of voice change for boys you are most likely to experience voice cracks during stage 3.
Go to page 16 for more on this!

When your voice cracks it is flipping quickly into falsetto. Your body is growing and your voice is adjusting to these changes in size and learning to coordinate the muscles, when your larynx has stopped growing your voice won't be so unpredictable.

It is important to keep singing during this time. What you are experiencing is a normal part of growing-up, you might want to adjust what you are singing to be slightly lower than what you were singing before so you don't push your voice out of its comfortable range.

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WARM UP - Gently activate your voice by singing in the middle of your range first. Stretch your body also and pay attention to how you feel, this may change each day.

AVOID POLLUTANTS - Things like smoke, paint, aerosols etc can cause your body to produce more mucus and irritate the voice.

SHOUTING - Avoid shouting and talking over background noise as this can strain your voice.

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SHOUTING - Avoid shouting and talking over background noise as this can strain your voice.

REST - Give yourself appropriate recovery time after being sick, a cough can travel through the vocal folds at 160 kilometres an hour! Allow your body the time to get well.

HOW DO YOU FEEL? - Be aware that things like stress anxiety, depression, and grief will all have an effect on your posture, breathing, energy and concentration.



Changing the image on these pages has had a dramatic effect on the design of the feature and the look of the page, the end result appears to be more befitting to a teenage audience and the use of the negative image, as pitched by Female 2 has a strong impact, the inclusion of a bold colour border taken from the image supports the page in looking more cohesive and relevant.

Girls! Let's talk about how to keep singing as your voice changes:



Girls!
Let's talk about how to keep singing as your voice changes.

There are generally **4 stages** of voice change for girls which happen as your body develops.

Stage 1 - Pre-pubertal Average age 8 - 11
There will be a clarity to the tone of your voice and it will still sound young and have no breaks.

Stage 2 Pubescence/Pre-Menarcheal Average age 11 - 13
You might notice a breathiness to your tone and this might cause problems with your volume.

Stage 3 Puberty/Post-Menarcheal Average age 13 - 15
Your sound may still be breathy and you might notice that the notes you are able to sing change week by week, you might find it more comfortable to sing in your lower range but this does not mean you have now lost your high notes!

Stage 4 Young adult female/Post-Menarcheal Average age 14 - 16
Your voice is settling down now, you should see your vocal range increasing again and the tone should sound more balanced and even across your full register.

- It is important to remember that your voice is still developing and that EVERYONE is different. Your voice will change and present different challenges along the way, here are some things which may help.
- Use your abdominal wall when breathing, it can be tempting to hold this in but you need to release it when you breathe in in order to get breath into your body.
- As your vocal folds grow you might find that you need more or less air flowing through your larynx - experiment with this to see if it helps with your sound.
- As your voice is developing you may want to stay within your comfortable range, there is no need to push beyond this, especially it it feels uncomfortable.
- Keep an eye on your posture, especially your head and shoulders, if these are aligned well it will help with creating power and resonance.

This two page spread focuses on how to manage voice change with information on the different vocal stages for female voice. It includes advice on how to navigate singing during this time. Both this feature and the one which follows for boys are intentionally formatted in a similar way to represent the similarities between the sexes and to foster dynamic flow in magazine design and content.

The following data was compiled.

My gender is	My age is	Pages 14/15- Girls Let's Talk About Voice Change. Please give your thoughts on the images, fonts, layout and content of these pages.
Female 1	11-12	The content was informational and it was all facts. The images and font matched and looked nice with the layout. It was over all very appealing and attractive
Female 2	15-16	The diversity of the people in the images is nice to see. The page breaks add clarity to the layout. The content has some pretty actionable points, you could have a take action feature to make the magazine more interactive
Female 3	15-16	i like all the text fonts and layout and i like the colours of the image, i also like the spacing between the bullet points i think it looks very satisfying
Female 4	9-10	Good.
Female 5	11-12	This page is really good.
Male 6	11-12	So i think that the image in this one matches because your talking about girls but maybe add something that can show how it changes but the font and layout matches.
Male 7	16 +	This is a good page, no suggestions :)
Male 8	11-12	
Female 9	16 +	the text (of the 4 stages) seems a lot smaller than the other pages, maybe make it a bit larger since there is space, and considering that it's the main point of the page. the image is very fitting and the fonts are also very nice
Female 10	15-16	I also like the way this one looks, it has a modernised colour pallet and is even with information and pictures.
Male 11	13-14	The consequences and solutions really make sense. The font is good but a font more unique would be better.

We can see here in the response table above that answers are becoming more concise and that Male 8 has not responded to this section. Content for these pages was described in the following ways: “informational… it was all facts”, “content has some pretty actionable points”, “this page is really good”, “this page is good, no suggestions”, the consequences and solutions really make sense”. There are many responses using the word “good” which in itself is positive but it must be considered that this is perhaps an easy response to give at this stage in the questionnaire, being that they are on question 10 of 13. Perhaps participant fatigue set in and this will be considered and discussed later on in the paper.



Girls!
Let's talk about how to keep singing as your voice changes.

There are generally **4 stages** of voice change for girls which happen as your body develops.

Stage 1 - Pre-pubertal Average age 8 - 11
There will be a clarity to the tone of your voice and it will still sound young and have no breaks.

Stage 2 Pubescence/Pre-Menarcheal Average age 11 - 13
You might notice a breathiness to your tone and this might cause problems with your volume.

Stage 3 Puberty/Post-Menarcheal Average age 13 - 15
Your sound may still be breathy and you might notice that the notes you are able to sing change week by week, you might find it more comfortable to sing in your lower range but this does not mean you have now lost your high notes!

Stage 4 Young adult female/Post-Menarcheal Average age 14 - 16
Your voice is settling down now, you should see your vocal range increasing again and the tone should sound more balanced and even across your full register.

- It is important to remember that your voice is still developing and that EVERYONE is different. Your voice will change and present different challenges along the way, here are some things which may help.
- Use your abdominal wall when breathing, it can be tempting to hold this in but you need to release it when you breathe in in order to get breath into your body.
- As your vocal folds grow you might find that you need more or less air flowing through your larynx - experiment with this to see if it helps with your sound.
- As your voice is developing you may want to stay within your comfortable range, there is no need to push beyond this, especially it it feels uncomfortable.
- Keep an eye on your posture, especially your head and shoulders, if these are aligned well it will help with creating power and resonance.



Girls!
Let's talk about how to keep singing as your voice changes.

There are generally **4 stages** of voice change for girls which happen as your body develops.

Stage 1 - Pre-pubertal Average age 8 - 11
There will be a clarity to the tone of your voice and it will still sound young and have no breaks.

Stage 2 Pubescence/Pre-Menarcheal Average age 11 - 13
You might notice a breathiness to your tone and this might cause problems with your volume.

Stage 3 Puberty/Post-Menarcheal Average age 13 - 15
Your sound may still be breathy and you might notice that the notes you are able to sing change week by week, you might find it more comfortable to sing in your lower range but this does not mean you have now lost your high notes!

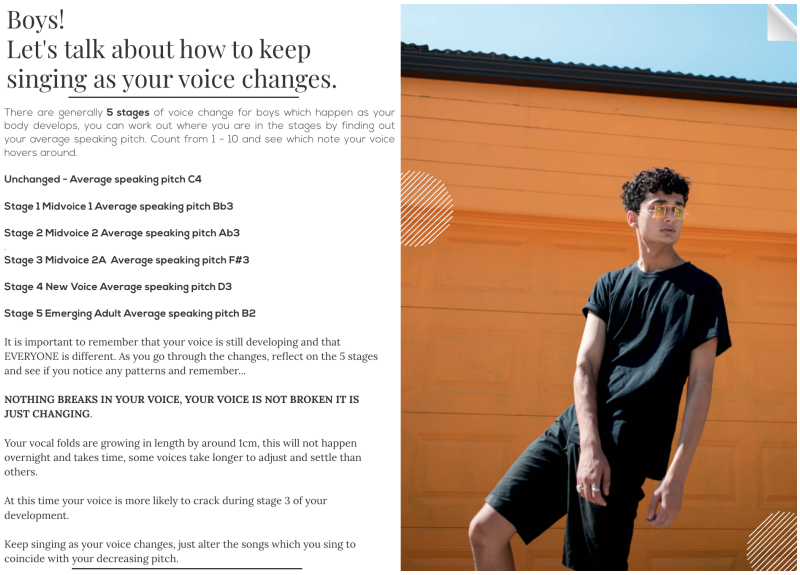
Stage 4 Young adult female/Post-Menarcheal Average age 14 - 16
Your voice is settling down now, you should see your vocal range increasing again and the tone should sound more balanced and even across your full register.

It is important to remember that your voice is still developing and that EVERYONE is different. Your voice will change and present different challenges along the way, here are some things which may help.

- Use your abdominal wall when breathing, it can be tempting to hold this in but you need to release it when you breathe in so you can get breath into your body.
- As your vocal folds grow you might find that you need more or less air flowing through your larynx - experiment with this to see if it helps with your sound.
- As your voice is developing you may want to stay within your comfortable range, there is no need to push beyond this, especially if it feels uncomfortable.
- Keep an eye on your posture, especially your head and shoulders, if these are aligned well it will help with creating power and resonance.

Attention was given to an increase in font size in order to make these pages easy to read with no changes made to the image. The diversity of this particular image was commented on as a positive of the overall magazine, something which was an aim in the original design considerations.

Boys! Let's talk about how to keep singing as your voice changes:



Boys!
Let's talk about how to keep singing as your voice changes.

There are generally **5 stages** of voice change for boys which happen as your body develops, you can work out where you are in the stages by finding out your average speaking pitch. Count from 1 - 10 and see which note your voice hovers around.

Unchanged - Average speaking pitch C4

Stage 1 Midvoice 1 Average speaking pitch Bb3

Stage 2 Midvoice 2 Average speaking pitch Ab3

Stage 3 Midvoice 2A Average speaking pitch F#3

Stage 4 New Voice Average speaking pitch D3

Stage 5 Emerging Adult Average speaking pitch B2

It is important to remember that your voice is still developing and that EVERYONE is different. As you go through the changes, reflect on the 5 stages and see if you notice any patterns and remember...

NOTHING BREAKS IN YOUR VOICE, YOUR VOICE IS NOT BROKEN IT IS JUST CHANGING.

Your vocal folds are growing in length by around 1cm, this will not happen overnight and takes time, some voices take longer to adjust and settle than others.

At this time your voice is more likely to crack during stage 3 of your development.

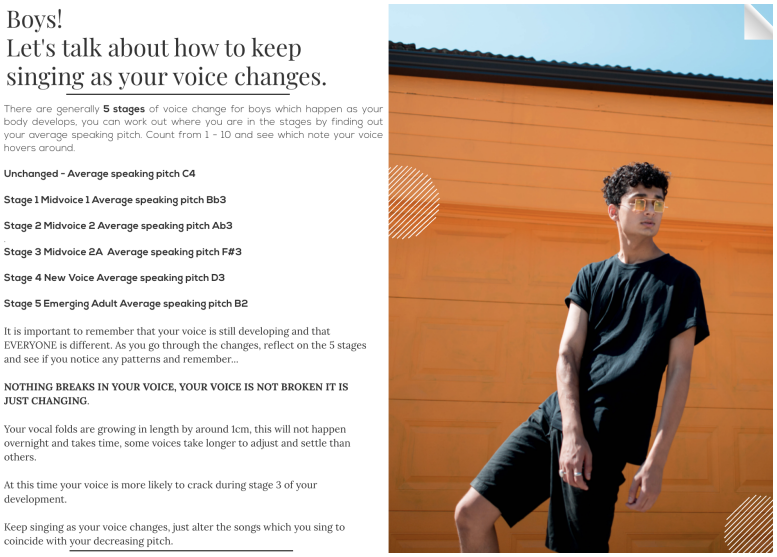
Keep singing as your voice changes, just alter the songs which you sing to coincide with your decreasing pitch.

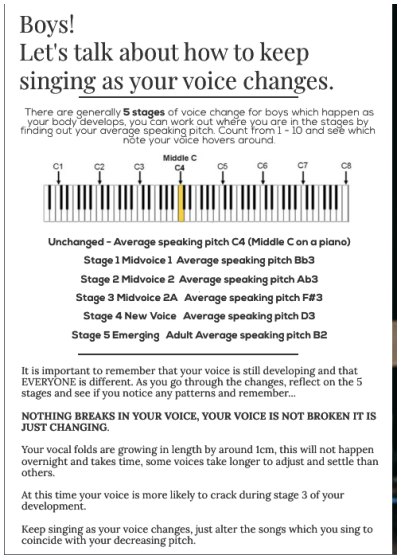
This double page spread focuses on how to manage voice change with information on the different vocal stages for male voice, including advice on how to navigate singing during this time. Bold and modern images were chosen for this with consideration given again for modesty and appropriateness in terms of the target audience and the language used. This image compliments the image used in the girls section on this topic with a similar colour palette and the information is presented again in the same format.

My gender is	My age is	Pages 16/17- Boys Let's Talk About Voice Change. Please give your thoughts on the images, fonts, layout and content of these pages.
Female 1	11-12	The content was helpful, informational and presented neatly. The fonts made the images look nicer and they look very attractive together with the amazing layout style.
Female 2	15-16	I did not understand the 5 stages change that well, the information like singing pitch etc, I couldn't understand what it means and was confused, the bottom half was reassuring.
Female 3	15-16	I like the layout to this page to it is slightly different from the girls one but they are both nice i also like how the image is on the opposite side as the girls one
Female 4	9-10	Uhhhh… still ……. good ;)(he he he)
Female 5	11-12	This page is really good but why in the Girls page it shows a girl singing while in this page it shows some random boy? If you could put an image of a boy recording a song (just like how you did with the girls) it would make more sense.
Male 6	11-12	So this one is good because the image is matching a boy and the font and layout match with the white background but like i said before maybe add something that can show how it changes like an image of the process
Male 7	16 +	This is a good page, no suggestions :)
Male 8	11-12	
Female 9	16 +	maybe change the image to a picture of a boy singing/more of a musical context. as for the content, i think the female page was more elaborated on compared to this page. (each of the 5 stages had an explanation/description, maybe that could be added to this page)
Female 10	15-16	This one, i dont understand the relevence of the photo, but other than that its even with photo v information, and the colours are nice to look at.
Male 11	13-14	The picture of the boy does not relate to a boy singing. Maybe there should eb a picture of a boy singing.

When analysing student comments here a recurring theme is certainly that they feel the image is not relevant enough in terms of being musical. Male 6 has identified that this is a "matching boy" and perhaps is more aware of the aesthetical ambition here but other comments from Female 5, Female 9, Female 10 and Male 11 all remark on wanting the image to relate to singing or music more. Female 2 comments that the initial information on the five stages of voice change for boys is confusing and Female 9 also calls for an

elaboration on the explanation and description of the 5 stages. Others find the content “helpful”, and “really good”. These responses are not detailed however and lack specific information on what they find to be helpful or really good. Alterations have been made to the image here and this page now shows a young male playing the guitar and singing in response to the feedback. The text has been reformatted in order to make space for the inclusion of a piano keyboard image with the pitches to support students in locating their voice change stage.



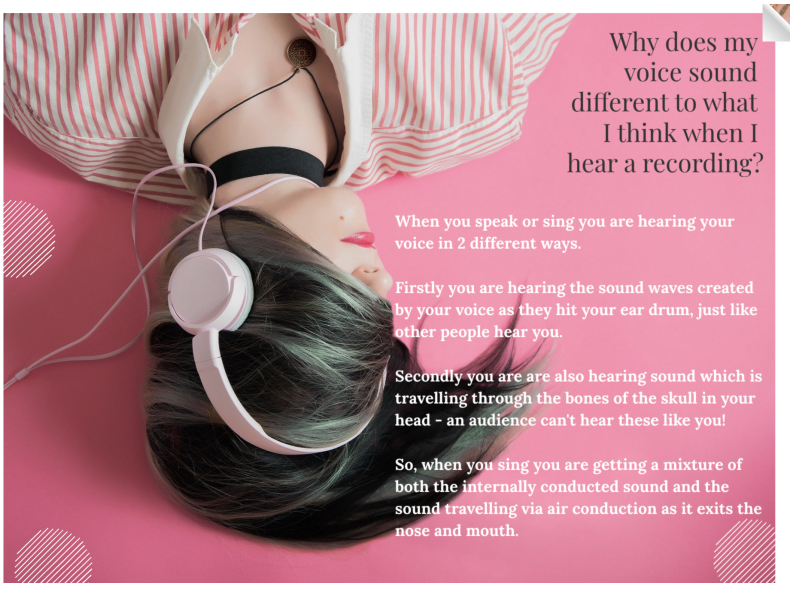




Draft

Published Edition

Why does my voice sound different to what I think when I hear a recording?



Participant 29 specifically wanted to know more about why their voice sounded different when they listened to it on a computer so this was included here to give students more information on voice production and what we

perceive as sound and what is actually heard by others. The information was presented in a simple form with a striking image of someone listening to a recording to represent the question posed. Questionnaire data highlighted the following comments.

My gender is	My age is	Pages 18/19- Why Does My Voice Sound Different? Please give your thoughts on the images, fonts, layout and content of these pages.
Female 1	11-12	The content was informational and answered the question well. The images were very nice, and the fonts made the images look nicer. The layout was very neat and appealing.
Female 2	15-16	Title can be another blocky or bubbly font in light pink/peach. Content is killer and the pinks adds a pop to the page. Adding a tip on how to modulate voice to make it sound better when you hear it on computer?
Female 3	15-16	i really like how the grey in the title looks against the pink, i also like the pink and how the image takes up both pages
Female 4	9-10	Looks like a magazine:)
Female 5	11-12	Oh my god thank you Ms.Zita for putting this page I litreally always record myself singing and it sounds horrible and now I know why so thank you, and by the way the page looks really good.
Male 6	11-12	The page is good but the image doesn't match because it's just a girl, but maybe you could add something like a before and after with light pitch symbols and deep voice symbols but the layout and font match the pink background.
Male 7	16 +	Possibly keeping the font the same as you did in the last few slides.
Male 8	11-12	
Female 9	16 +	this page is very interesting, i really like the content.
Female 10	15-16	For some reason, i just dont really like the picutre you used... its.a nice colour, and a good amount of information, im just picky.
Male 11	13-14	The white color words could be darker as they blend into the light pink color. The layout is good I like the girl listening to songs as an image.

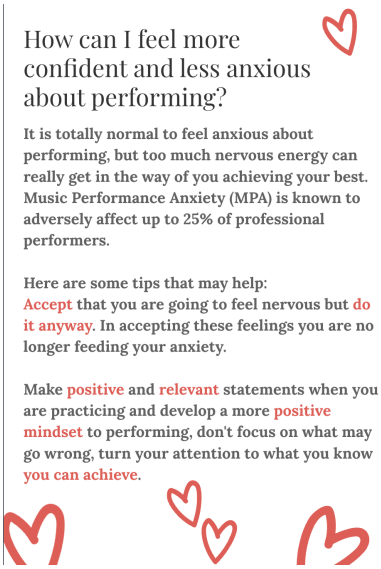
Responses here are getting shorter and it is acknowledged again that perhaps fatigue is setting in by this point in the questionnaire. The content on this page was well received and the feedback centred mainly on layout and image choice, with comments including “the image didn’t match”, “it’s just a girl” and “I just don’t really like the image”. There was also feedback relating to the colours and fonts used here and a request for “keeping the same font you used in the last few slides”. The information on voice production and how we hear ourselves was seen as “informational” by Female 1. Female 2 referred to it as “killer” which is believed to be a positive. Female 5 seemed very enthusiastic, “thank you for putting this page, I literally always record myself singing and it sounds horrible and now I know why so thank you”. Female 9 put “this page is interesting. I really like the content”.





A monochrome colour wave was used here after the selection of a new image showing a recording microphone in black and white. The text and content remained unchanged with the inclusion of a banner reading “featured” to give the pages a more dynamic feel and overall balance to the page.

How can I feel more confident and less anxious about performing?:





Finally information on confidence and anxiety is presented alongside an image of two girls deep in conversation. Statistics were provided on performance anxiety in conjunction with tips on how to manage and alleviate these feelings. This was a point of focus especially due to the large volume of initial participants who stated low confidence and performance anxiety as challenges to their vocal development.

My gender is	My age is	Pages 20/21- How Can I Feel More Confident And Less Anxious About Performing? Please give your thoughts on the images, fonts, layout and content of these pages.
Female 1	11-12	The information was helpful but it didn't really answer the question well but it answered the question though. The layout was perfect with the images and fonts, because they were just appealing to each other.
Female 2	15-16	This page gives out a loving, comfy vibe with all the hearts and light colors again I enjoy the pink color emphasis on certain words. It is a very positive page, and gives tips on how to control nervousness a problem most people face to end the magazine on and the font is cute!
Female 3	15-16	i like the hearts and the highlighted words in pink and how they are the same tones as the pinks in the image
Female 4	9-10	Uhhhmmmmmm……. I personally still feel a bit nervous…….. BUT! Great work :) I'm proud of you Mrs. Zita and whoever helped you.
Female 5	11-12	This page is perfect.
Male 6	11-12	This page is a really good one because it really helps the reader to know how to not be anxious and i'm the image matches because it looks like someone helping another and the layout and font match because it doesn't block the image while also having hearts to know that people can support you .
Male 7	16 +	Same font again but for the body paragraphs :)
Male 8	11-12	
Female 9	16 +	love the hearts and the image, very relaxing/soothing tone. I also really like the specific bolded words, very good choice. overall love this magazine! <3
Female 10	15-16	I like this page, it seems warm and welcoming, and overall just nice colours and feelings to it. good job.
Male 11	13-14	The image makes sense and relates to the page. The information is also good.

The last page for students to feedback on was this spread relating to confidence and anxiety. It may have been pertinent to include this earlier on in the questionnaire to

collate more detailed information especially as this was viewed as priority content as a result of the first wave of data. Taking this into account it is useful to note that Female 1 identifies that for her “the information is helpful but it didn’t really answer the question”. Female 4 also states “Uhhhmmmmmmmmm….I personally still feel a bit nervous”. The design of this page was created to promote feelings of love and acceptance and the image was intended to show that people are listening to how the reader feels. Responses seem to concur with this, Female 1 saying “the layout was perfect”, Female 2 noted “this page gives out a loving, comfy vibe… it is a very positive page. Female 5 only says “this page is perfect”. Male 6 also makes notes of the hearts showing “that people can support you”.





Overall the look of this page was barely altered, the focus was on content and formatting. More space was created by decreasing the font size in order to provide more information and to hopefully “answer the question”. Three additional paragraphs were provided here to add more detail and depth to the action that students may take.

When assessing the internal validity (Guba and Lincoln 1985, 1989) we are essentially exploring how well the study was carried out. This may be viewed as a rather simplistic qualitative research project in its nature, it is small scale and niche to the organisation, and the students involved. It is felt that the questionnaires did generate pertinent usable

information. There was an obvious decline in the amount of words and specific content feedback at times, this was clear to see in the latter part of the data collection as questionnaire fatigue kicked in and it is accepted that better design of the questionnaire could have prevented this.

Female 4	9-10	I think it was really good I was able to read it.	Maybe the background could like connect to the names more.	I think the things you added are thoughtful and really good. Good job Ms. Zita :)!	It was really really ……... good	You explained everything very well … I think so……	Good……(I want to be my own person thou……..). P.S. I think you should do something like this for the male side of things so they don't feel left out :).	Helped a lot	Good.	Uhhhh… still ……. good ;)(he he he)	Looks like a magazine:)	Uhhhmmmmmm……. I personally still feel a bit nervous……. BUT! Great work :) I'm proud of you Mrs. Zita and whoever helped you.

Female 9	16 +	I really like the image; high quality, nice compositio n. In my opinion, the font in the top right should be more bolded than the bottom text.	Maybe the text sizes could vary, it feels a bit crowded; maybe some of the texts can be larger than others (for example the more popular artists' texts are more enlarged). The use of red is really nice and I like how it matches with the second page.	I love this page, the bolded text in the middle is very effective in engaging the audience. I also like the different text box designs. The quotes are also engaging I don't think any changes need to be made (this is my favorite page)	The layout is organized, the text format is well laid out. "resonatory system" the "system" should be in the color blue as well to add consistency with the other blue-colored texts. maybe the diagram could be a bit larger?	to avoid repetition, since the "during these changes you might notice:" list for both boys and girls are exactly the same, you could just keep it to one list and apply it to both genders. and maybe the "during these changes" list could go on top, before the explanation behind the changes. for example the subheading could be "as you get older, you experience these changes in your voice:" and then follow that by giving the scientific explanation behind it. (maybe is more engaging) also very very small detail but capitalize "BOYS!" to match the capitalized "GIRLS!" :)	this page is really interesting and i thiink a lot of people will be interested in the different techniques she uses. maybe you could specify her vocal range (the specific notes). maybe also expand more on what a whistle tone is.	really nice page, i like the image, gives a calming effect, adds to the "healthy" tone	the text (of the 4 stages) seems a lot smaller than the other pages, maybe make it a bit larger since there is space, and considering that it's the main point of the page. the image is very fitting and the fonts are also very nice	maybe change the image to a picture of a boy singing/more of a musical context. as for the content, i think the female page was more elaborated on compared to this page. (each of the 5 stages had an explanation/des cription, maybe that could be added to this page)	this page is very interestin g, i really like the content.	love the hearts and the image, very relaxing/soothin g tone. I also really like the specific bolded words, very good choice. overall love this magazine! <3

If we look at the responses from the youngest and oldest female participants we can see a greater level of detail from the more mature female which would be anticipated due to stages of appropriate learning development. The young student (9-10) has repeatedly used the word “good” in her feedback, interestingly she has combined this with friendly and positive comments like “good job”, “great work” “I’m so proud of you” and has also included 4 smiley faces across the feedback. The wording here in the responses is full of praise and positive affirmations and when she addresses something she would like to change she uses the word “maybe”. The word maybe places the request in a less dominant position and it shows that perhaps she doesn’t want to tell the teacher what to do. It could also be argued that her feedback is symptomatic of how teachers positively feedback to her. The older female (16+) begins with a positive observation and then follows with an improvement or vice versa, she appears to balance her opinions with comments of what she likes also. This is a more caring and

astute form of feeding back and could be considered befitting of her age. If we look at the amount of words used by both students as the questions progress it does not appear to dip particularly as we reach the end of the questionnaire and the overall trajectory is quite similar.

Male 6	11-12	So I love the design of this front page because the image is basically people having fun which is a good thing while also trying to make music. just one thing is the font it would be better if it would have like some music notes.	so this is a very good page and the picture matches the sadness of the people who had suffered from voice damage and the layout is matching the theme and the font suits it!	For this page I think this is a very good idea because these questions have been here with me for a while and it also tells the person that the questions will be answered. The image is good because there are lots of people there and the font is good because it's readable and the layout matches the image by making it go all around with the people	I think that the image should have been someone that is either singing or something that shows the vocal cords but the layout is good because it is easy to read and so is the font.	This is a really good page because most people wants to know this and it strikes to the teenagers or the kids hitting puberty. The image matches because it shows pink and blue which represents boys and girls. The font is matching but needs to be a little bigger because some people would have to squint to read but the layout is perfect	So this strikes more to the girls because most male singers wouldn't want to sing like her. The image matches because it's Ariana Grande and the layout is nice because it doesn't block the singer herself and the font matches the background	This page is perfect because young singers don't know what they should do to keep their voice healthy. The image is questionable because it doesn't match what their talking about but the font and layout is good because it's readable and isn't blocking the image.	So i think that the image in this one matches because your talking about girls but maybe add something that can show how it changes but the font and layout matches.	So this one is good because the image is matching a boy and the font and layout match with the white background but like i said before maybe add something that can show how it changes like an image of the process	The page is good but the image doesn't match because it's just a girl, but maybe you could add something like a before and after with light pitch symbols and deep voice symbols but the layout and font match the pink background.	This page is a really good one because it really helps the reader to know how to not be anxious and i'm the image matches because it looks like someone helping another and the layout and font match because it doesn't block the image while also having hearts to know that people can support you .
Male 7	16 +	I love it! Maybe we could change of "A vocal wellness magazine" to something in capital letters to make it seem more emphasized.	I like the table of contents. With reference to the layout of celebrities who have suffered vocal damage, maybe you could keep the font the same to keep the same theme. In addition to that, the way they have put randomly is nice but maybe make them a bit smaller?	This page is really pretty, I like the layout.	This page is nice as well.	Maybe more diversity in terms of pictures of people on the page, we need somebody to possibly relate to.	This is my favorite page, love it!	This is a good page, no suggestions :)	This is a good page, no suggestions :)	This is a good page, no suggestions :)	Possibly keeping the font the same as you did in the last few slides.	Same font again but for the body paragraphs :)

If we look at the responses from the youngest and oldest male participants we can immediately see that the older male (16+) appears to have written less in his responses and that 3 of his responses are identical - “This is a good page, no suggestions :)”. There are similar comments across the questionnaire also, “This page is nice as well”, “This page is really pretty, I like the layout”. The first two comments from this student have more detail, with specific ideas for improvements given. It appears that this student could have become disenfranchised quite quickly with the questionnaire process. The younger male (11 - 12) appears to offer a consistent amount of opinions. He offers his ideas with explanations and ideas for changes, “this is good because…maybe try…” a tactic he employs across his responses. Again there does not seem to be a drop off in the way he replies as the questionnaire reaches completion nor are the answers becoming more simplistic. Students are not individually identifiable and

whilst this adds to the confidentiality of each student member it does mean that further investigation cannot be followed up with any specific participant.
How appropriate is this study, what is the external validity? As a work based research project it was always intended to be of benefit to this particular student body, therefore it is felt that it has absolute external validity, being actioned by the students as they were part of the research process throughout. The more important focus here is the reliability and objectivity of the study and if impartiality has been retained in the presentation of data. It is felt that study does have descriptive validity (Maxwell 1992), responses have been conveyed accurately as the words of the students have been presented in their original form. We must consider how truthful those words are and the conflicts at play in regards to what students think is an appropriate response to the questionnaires as opposed to what they really want and need to say. If students have indeed been truthful then some bias may be addressed here. Magazine content themes were derived from this data and the responses given to the draft shaped this resource in its entirety. It is the words that bring student experience to life, and that which has given the researcher the platform to make the connections (Campbell 2014). How impartial have those connections been? From the outset bias was acknowledged here and research was not undertaken to prove a theory but to further support the learners within areas they identified. Therefore it is anticipated that the researcher has brought their own perspectives to the selections and meanings of the data but at all times has kept the fundamental goal in sight.

Conclusion and recommendations

The emergence of practice-based research has allowed for research to be intertwined with practice, the practice is the research and the results are inherently suited to the institution for which it was conducted (Harrison and O'Bryan 2014). This "deep insider" research (Edwards 2002 p.71) can lead to a "distinctive way of knowing about teaching and learning that will alter - not just add to what we know in the field" (Cochran-Smith & Lytle, 1993 p.85). The opportunity to engage in this form of research with students has brought with it complexities and unique rewards. To support reflection on this process

the cyclical model devised by Atkins and Murphy (1993) has been applied (Appendix 8). When considering reflective teaching Pollard (2005, p15) comments on the duality of the “aims and consequences” combined with “means and technical competence” giving strength to the moral purpose of the work. The aims were to broaden knowledge and understanding of adolescent voice change and wellness in music education and to develop awareness of how best to support students during this time. There was a desire to create a meaningful and relevant digital resource in the form of a teenage wellness magazine. This also involved mastery of computer design skills and relevant software. In the beginning, the main intention of this resource was for it to be used in the music classroom as an extension of student learning. However an encouraging benefit has been witnessing the wider pastoral applicability of the resource which had not been considered during the project design. With the resource being used immediately during school puberty talks as an aid to students during these sessions (Appendix 7) it has opened doors to discussion amongst teaching peers on adolescent physical and mental development. This begins to demonstrate its validity and potential usefulness within this institution. This pilot magazine is perceived to look contemporary, of a professional quality and fit for the young adult demographic, it will be telling to see how it is received by students. It would have proved enlightening to include this as the next step of this research cycle and although this is not actionable now it will still be considered moving forward in practice. Further magazine editions could also be added to a library of digital resources in the future should there be a desire and need. While developing knowledge of adolescent voice change, a deeper appreciation for the challenges faced by our young learners during this time has been fostered. As research unfolded it became apparent that student knowledge on voice change was lower than anticipated and the inclusion of rudimentary information quickly became the focus of this first magazine. This may not have resulted in a resource which is transferable to any other context but it appears to prove it's worth for these students at this time in this place which has been the objective. This is the product of action research with the students and it could be argued that this makes the resource unique and hugely valuable for them specifically. A future recommendation would be for more small scale research projects around this topic to be conducted. As we see an increase in teenage mental health issues with one

quarter of adolescents experiencing a mental health issue over the last year (Merikangas, Nakamura, & Kessler, 2022) the creative arts can be an ideal platform for student wellness and support to be embedded into the curriculum. A recent practitioner review stated there is growing interest in the application of contemporary digital technologies to support the mental health of young people (Bevan Jones et al., 2020). Whilst it is noted that students should be supported by qualified health professionals within school systems it could be of benefit to the community to underpin it further in creative arts subjects where possible.

There has been a deep level of reflexivity required on this project and the motives behind this research had to be examined. Reflexivity, the “turning of the researcher lens back onto oneself to recognize and take responsibility for one's own situatedness within the research and the effect that it may have on the setting and people” (Berger, 2015, p. 220). During this process a bias was revealed for what the researcher wanted or needed to demonstrate as part of their learning and what was actually required by the students to be used as content in the magazine. This disconnect was exposing and raised some questions. As a research practitioner you may want to impart all knowledge to your students but if the student's need is only for a small percentage of what you know, then how are you fulfilled as an educator and or researcher? If students do not require what you know at this point, is there a benefit to the practice if the knowledge and understanding are not shared and remain only in the researcher's head? Engaging in this genuine introspection has highlighted areas for self-improvement and further personal growth. Larrivee (2000, p.293) noted that “fusing personal beliefs and values into a professional identity” is integral to developing critical reflection and the continuing self-awareness required for reflexivity. This research journey has also led on to other areas of personal development, specifically around time management and effective use of free time due to the size and demands of this project. Further consideration also has been given to the teaching and learning needs of international students and how learning may be reorientated (Quinn, 2000, p.82) to best serve them. Specifically in regards to terminology and colloquial language, this will be a point of focus moving forward. This project has had a profound impact on the way teaching adolescents will

be approached here in the future and has shone a light on the potential for further development within age specific resources to support them further.

On the whole, when evaluating this practical action research it is felt a definitive step has been taken towards solving a problem for these students (Grundy 1998). McKernan (1991 p. 20) also states that “the goal of practical action researchers is understanding practice and solving immediate problems”. He goes on to distil this process into the practitioner reflecting on the research and practice, utilising the new information and “implementing interventions that may affect lasting changes”. The word intervention here is fitting as following on from the Covid-19 pandemic it was felt that an intervention was required for these young learners.

This intervention may be accessed here:
https://www.flipsnack.com/C8678BDD75E/your-voice-a-vocal-wellness-magazine/full-view.html

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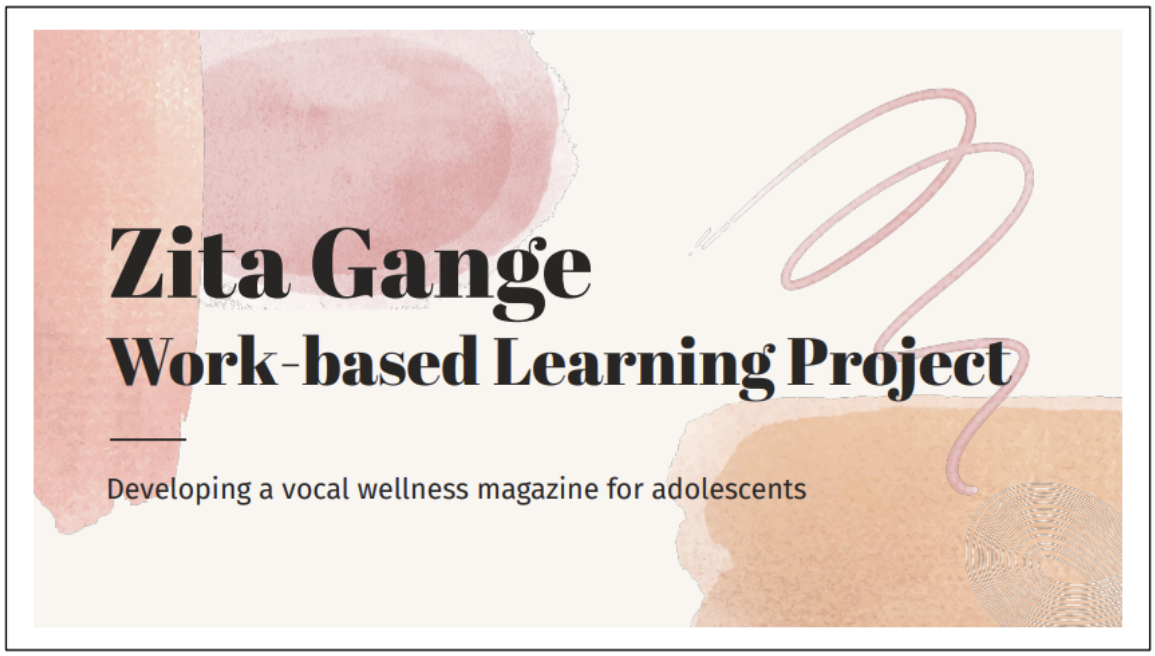
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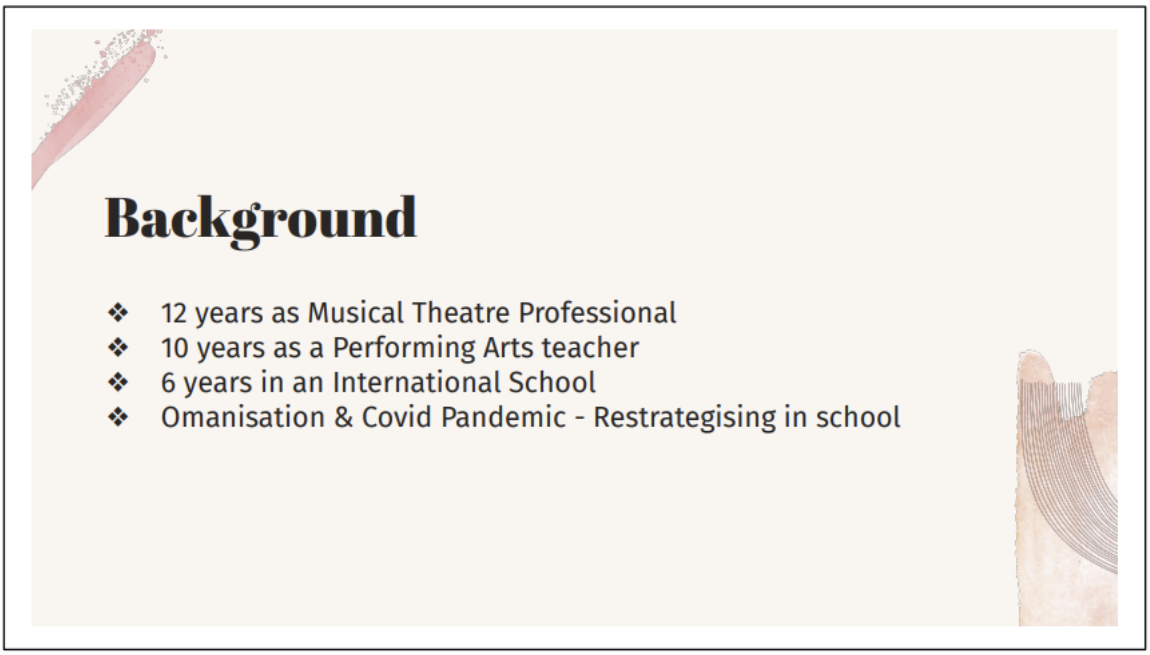
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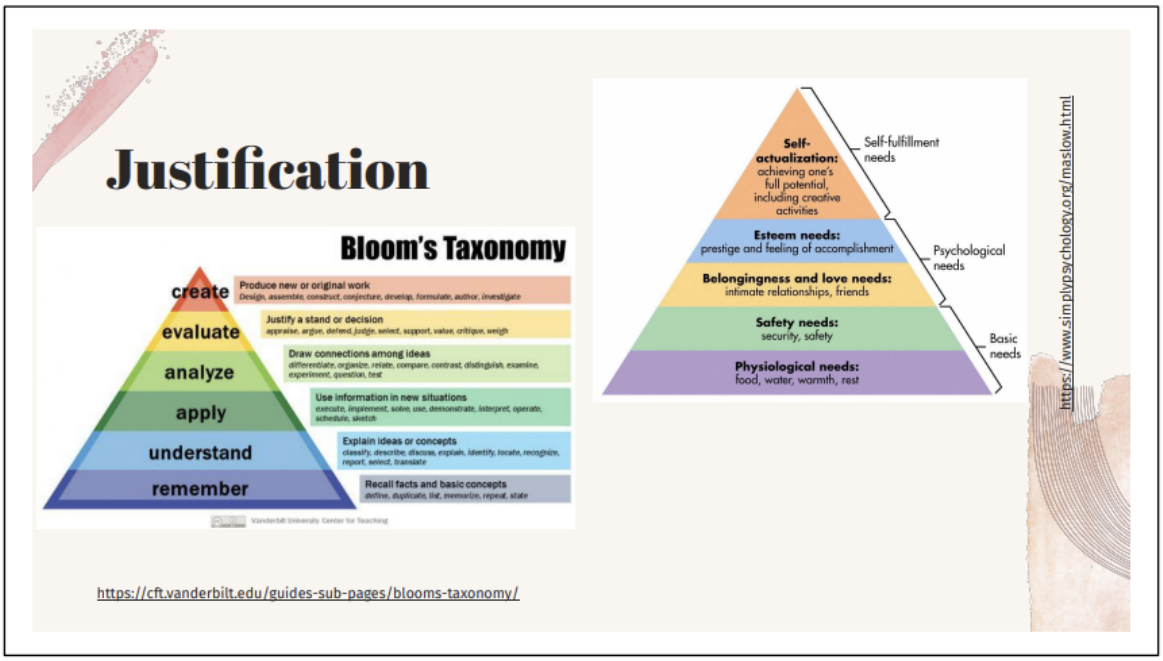
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Presentation Slides





Performer turned teacher
Teaching at an International School - Omanisation and Pandemic - loss of ex pats change in demographic and curriculum focus
Fallen into middle school
Now working with adolescents engaged in general music programme after a LOT of change
10 week rotations across the year



Personal observation - Teenage development having massive impact on music classroom SO OBVIOUS NOW I ONLY TEACH MS

Music Education non existent over Covid - students returning to school with very low skills and confidence levels

Putting Maslow before bloom finding a balance

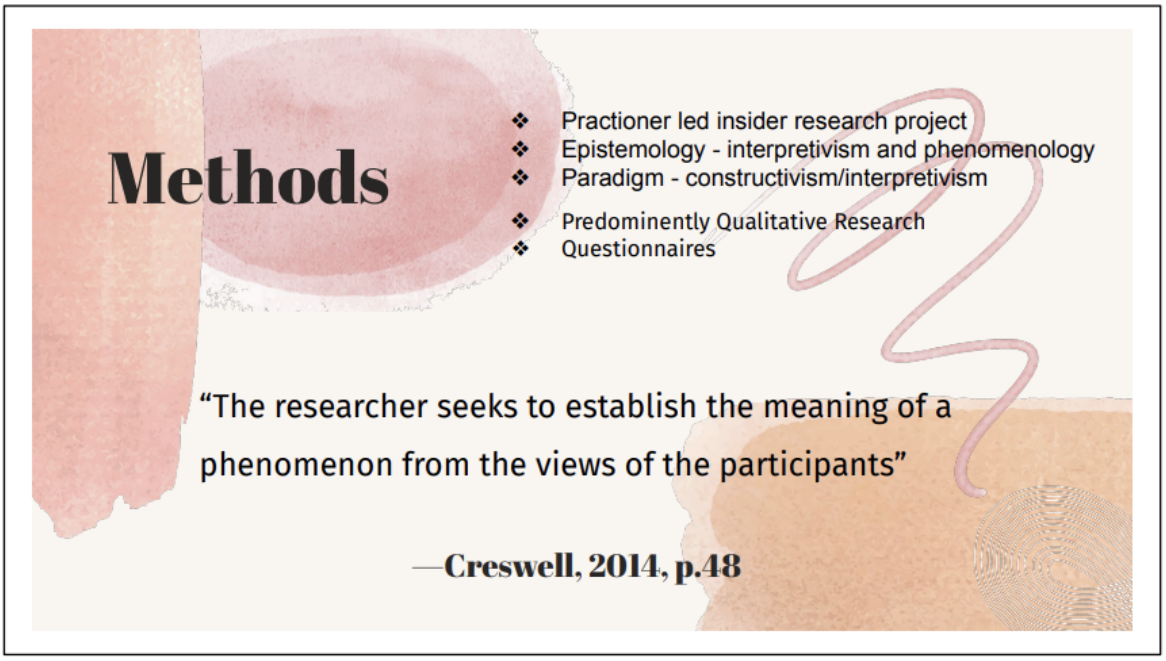
United Nations paper entitled *Education during Covid 19 and beyond*, gave a recommendation to strengthen data and monitoring of student data - opportunity to gather pertinent data.

Also perceived gap in the market - something like this doesn't exist in this combination

Aims & Objectives

- Aim - The creation of a vocal wellness magazine for adolescents

- Objectives -
  What do they need?
  What do they want?
  Development of skills in digital design
  Create draft and get student feedback
  Redesign & Launch

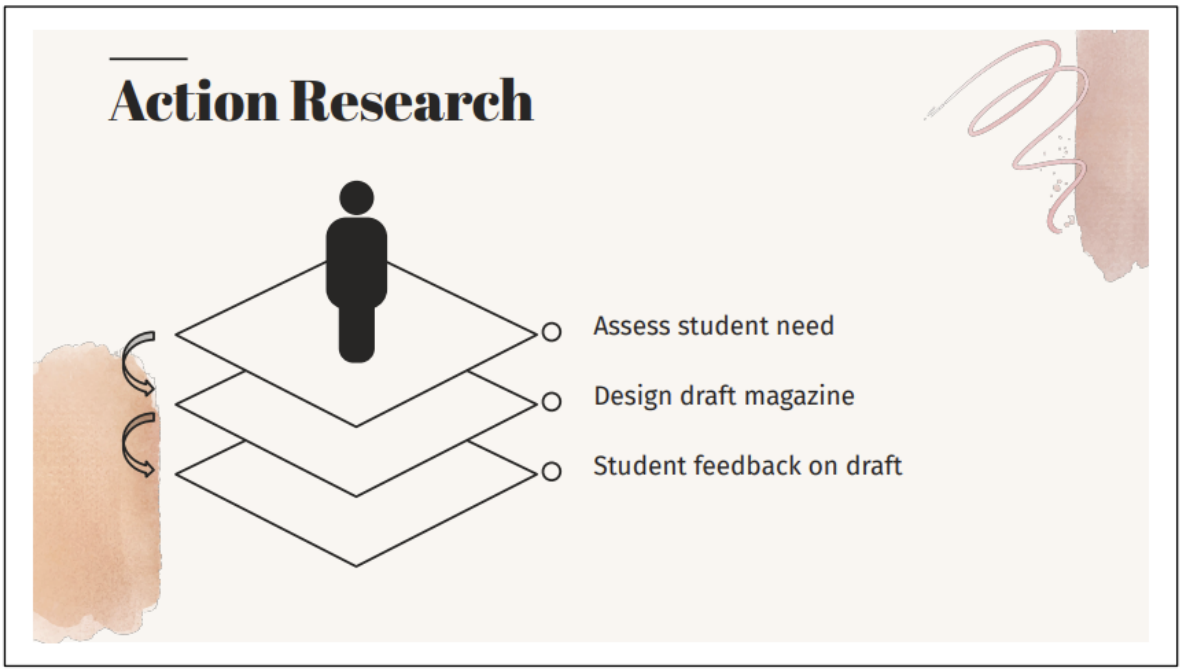


Practioner led insider research project - impact of this??

Epistemology: interpretivism and phenomenology (gain an empathetic understanding of what they need as individuals)

Paradigm: constructivism/interpretivism **"the world of human experience"**

(Cohen & Manion, 1994, p. 36)

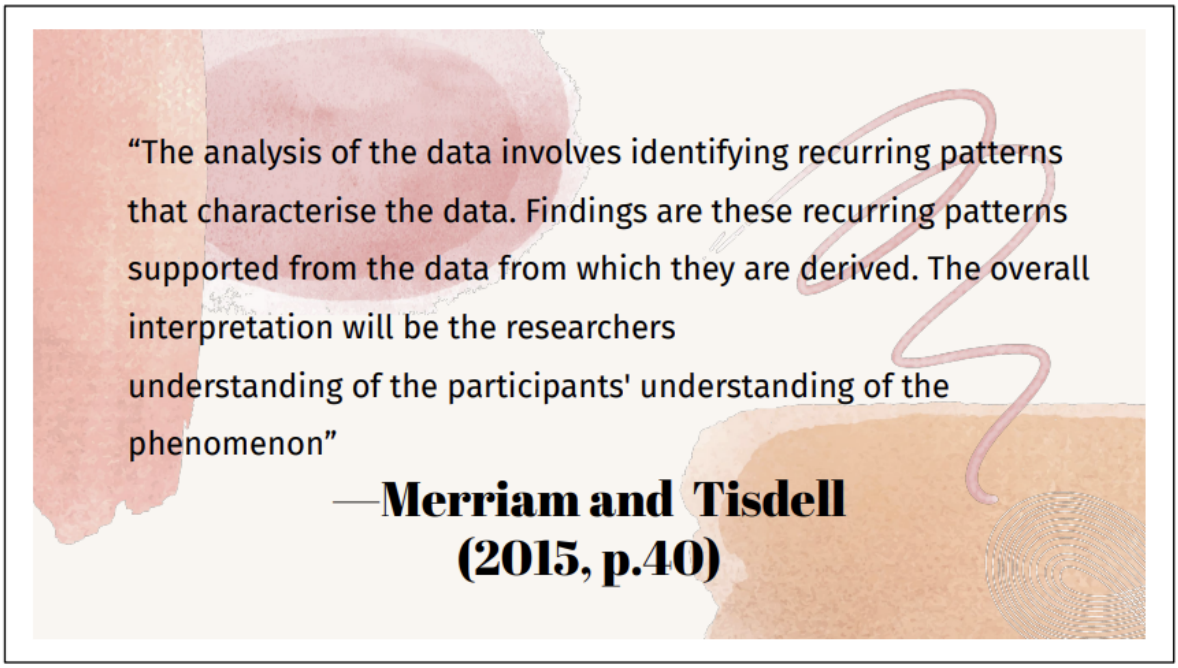


Action research is immersed in an agenda for change (Hine 2013) - McKernan (1991 p. 20) also states that “the goal of practical action researchers is understanding practice and solving immediate problems”. He goes on to distil this process into the practitioner reflecting on the research and practice, utilising the new information and “implementing interventions that may affect lasting changes”.

INSIDER RESEARCH!!! Advantage of knowing the environment, opportunity to connect in a different way with kids

The challenge of remaining objective, not seeing the obvious

“Prime position to investigate and make changes to practice” (Costley Elliott & Gibbs 2010 p.3)

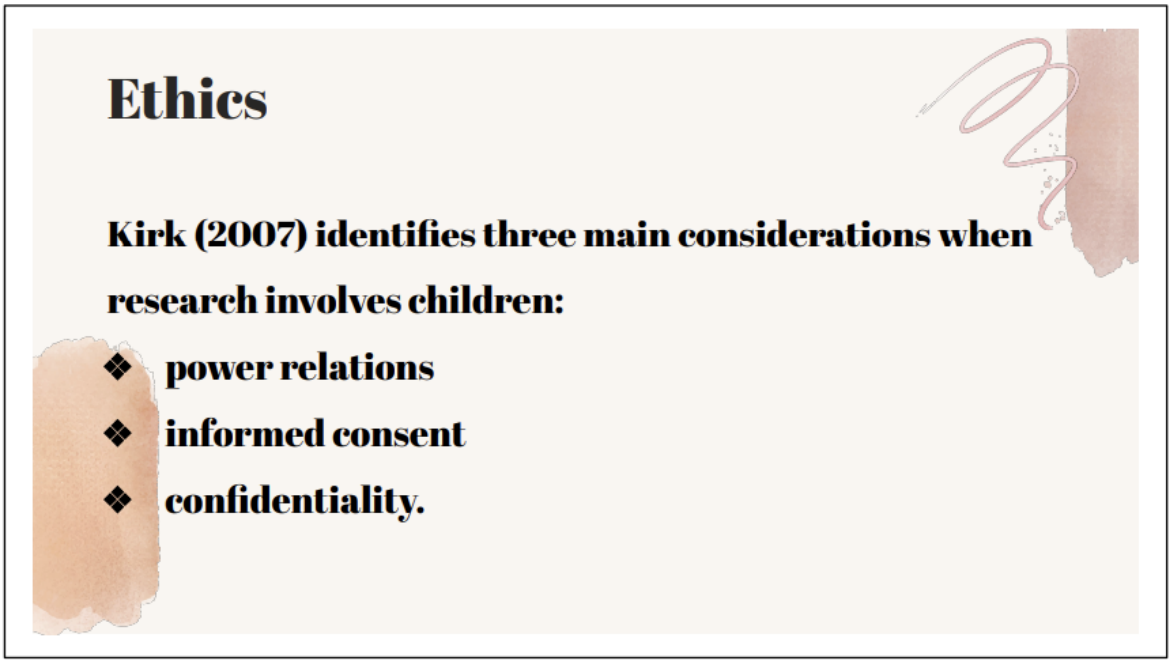


BIAS

My Bias - objective being to create the magazine resource must interpet with clarity and no agenda

The bias of students - my students… and the ethics coming from this…

Project involves dialogue between teacher and student, care must be given to ensure that this does not hinder or influence student responses and consideration must be given to respect the rights and sensitivities of the students involved, (Winter 2003).

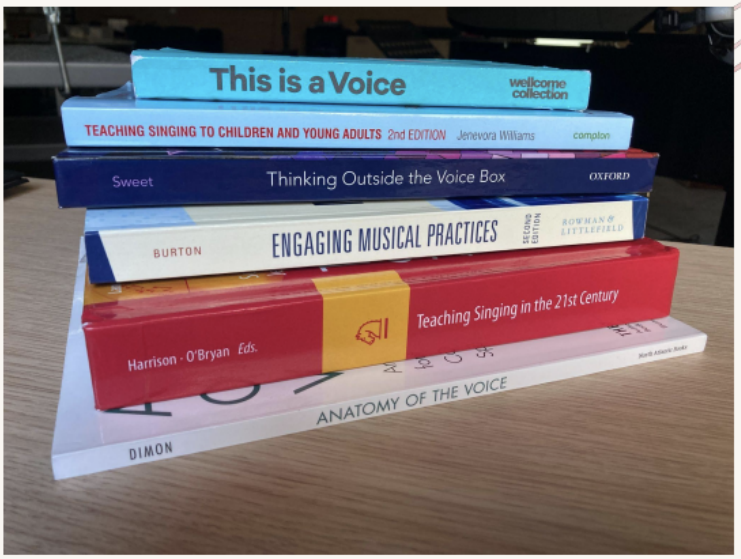


Ethical permission was obtained under the guidance of core ethical documents, UWTSD

Policy, procedures and practices stated in school child protection documents which are aligned with Omani Law, United Nations Rights of the Child and International School expectations worldwide.

Anonymous/Voluntary/Advice from school counsellor

Literature Review



Cooper's (1998) taxonomy of literature reviews table

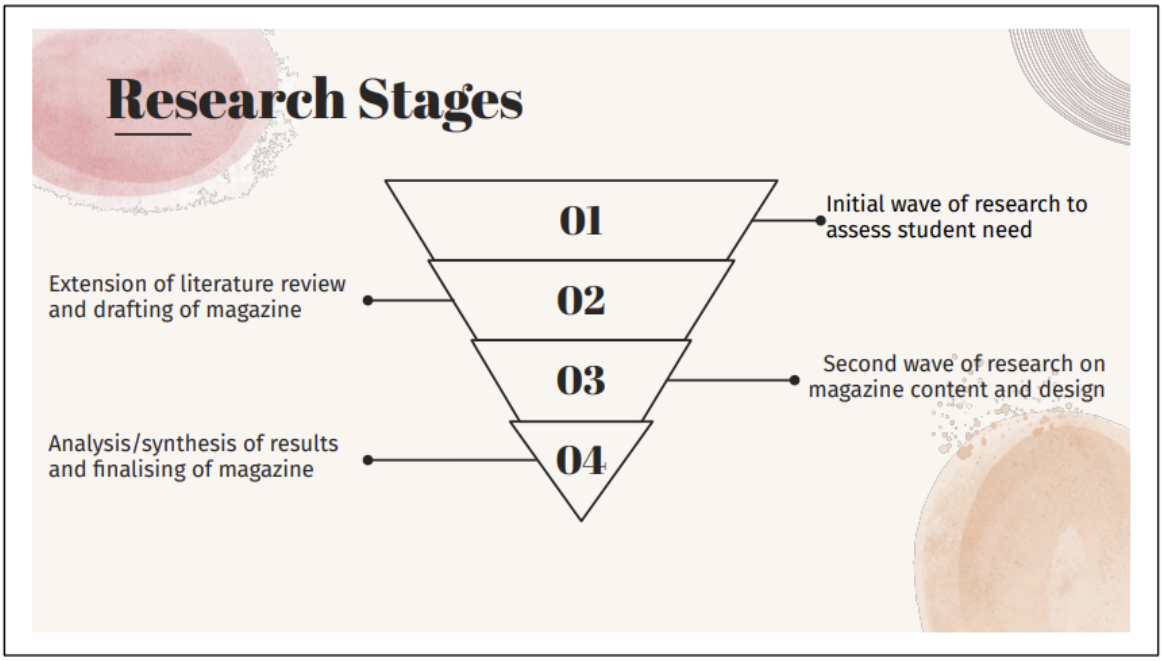
identify central issues and explore these in depth.

An espousal position due to the personal learning outcomes

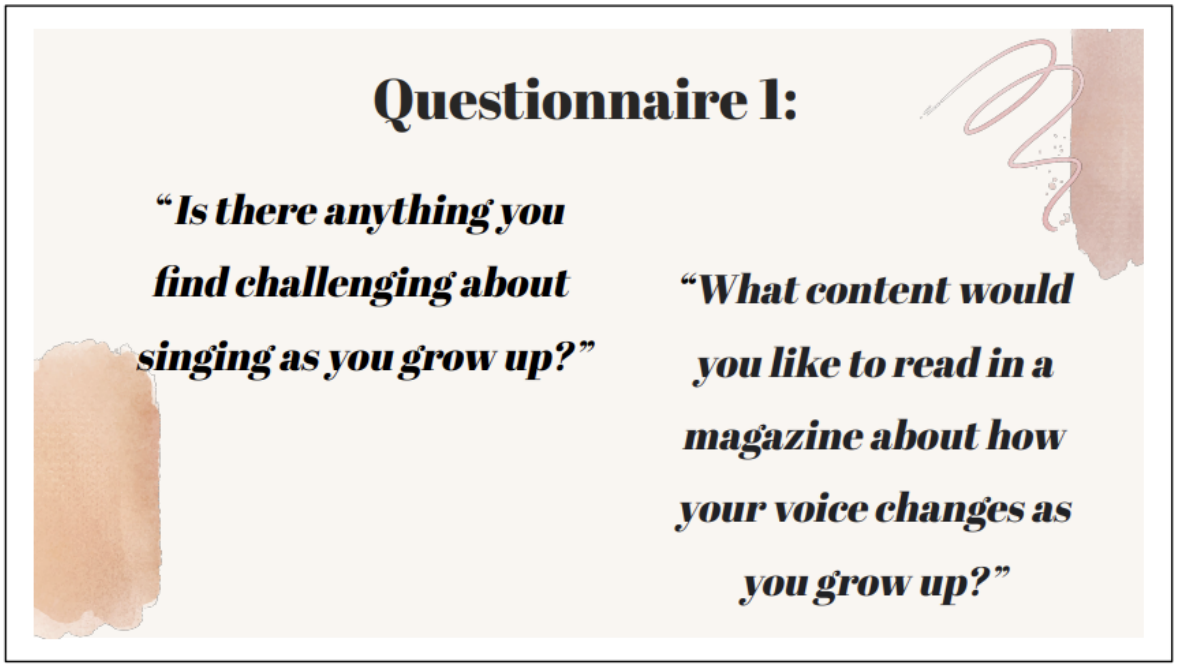
conceptual format.

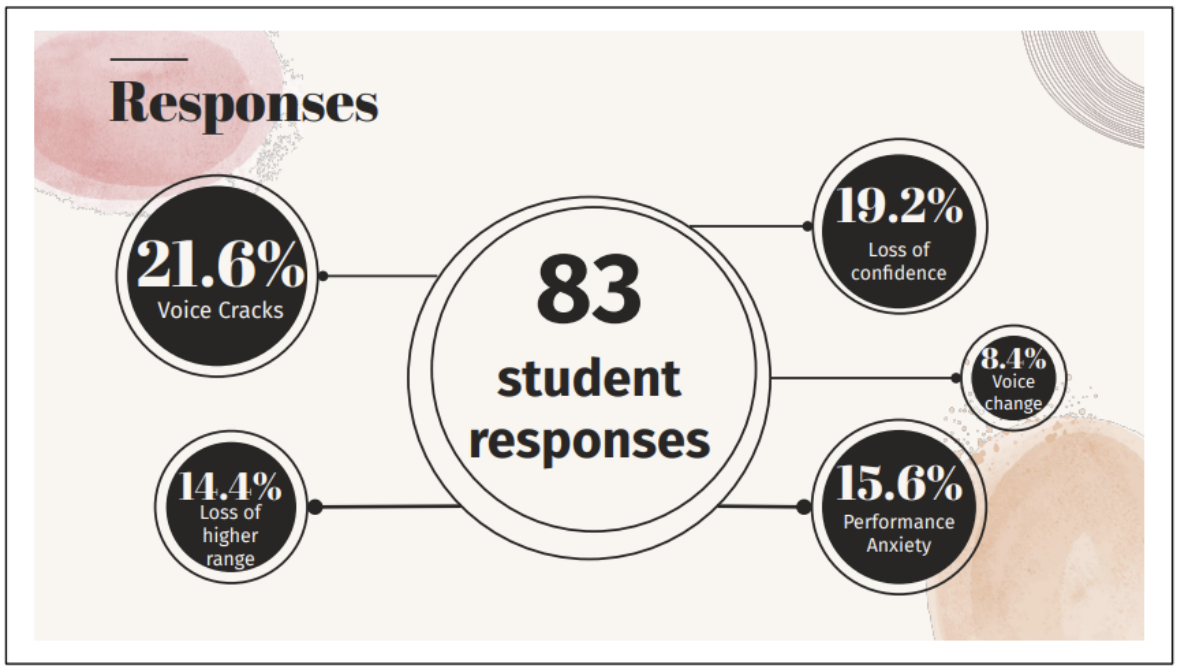
Text books and published peer reviewed lit

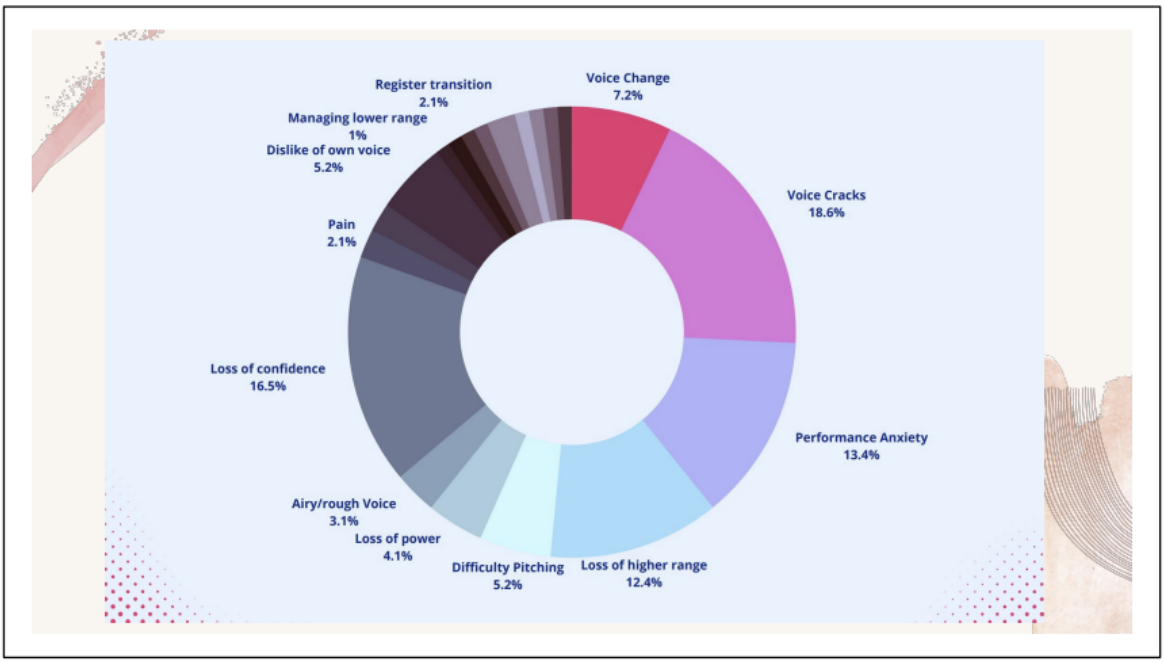
Some of the key texts - difficult to get books into Oman


Research Stages
01
Initial wave of research to assess student need
Extension of literature review and drafting of magazine
02
03
Second wave of research on magazine content and design
Analysis/synthesis of results and finalising of magazine
04

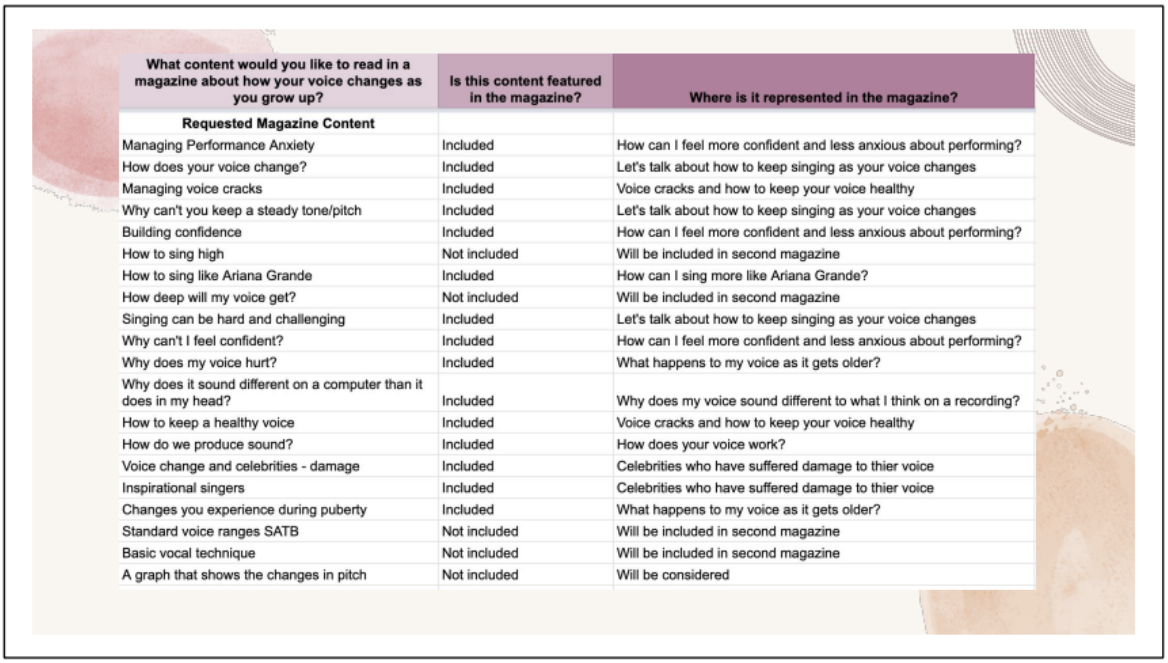

Findings


Questionnaire 1:
"Is there anything you find challenging about singing as you grow up?"
"What content would you like to read in a magazine about how your voice changes as you grow up?"

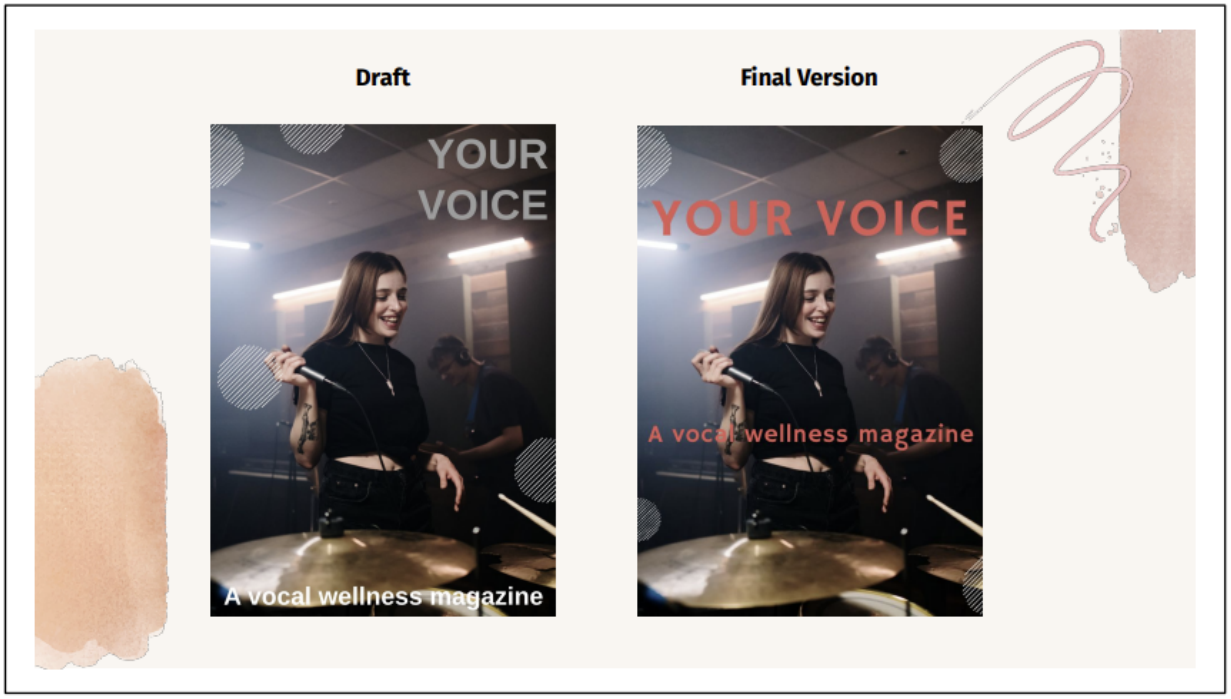

Responses
21.6%
Voice Cracks
19.2%
Loss of confidence
83
student responses
8.4%
Voice change
14.4%
Loss of higher range
15.6%
Performance Anxiety


Register transition
2.1%
Voice Change
7.2%
Managing lower range
1%
Dislike of own voice
5.2%
Voice Cracks
18.6%
Pain
2.1%
Loss of confidence
16.5%
Performance Anxiety
13.4%
Airy/rough Voice
3.1%
Loss of power
4.1%
Difficulty Pitching
5.2%
Loss of higher range
12.4%

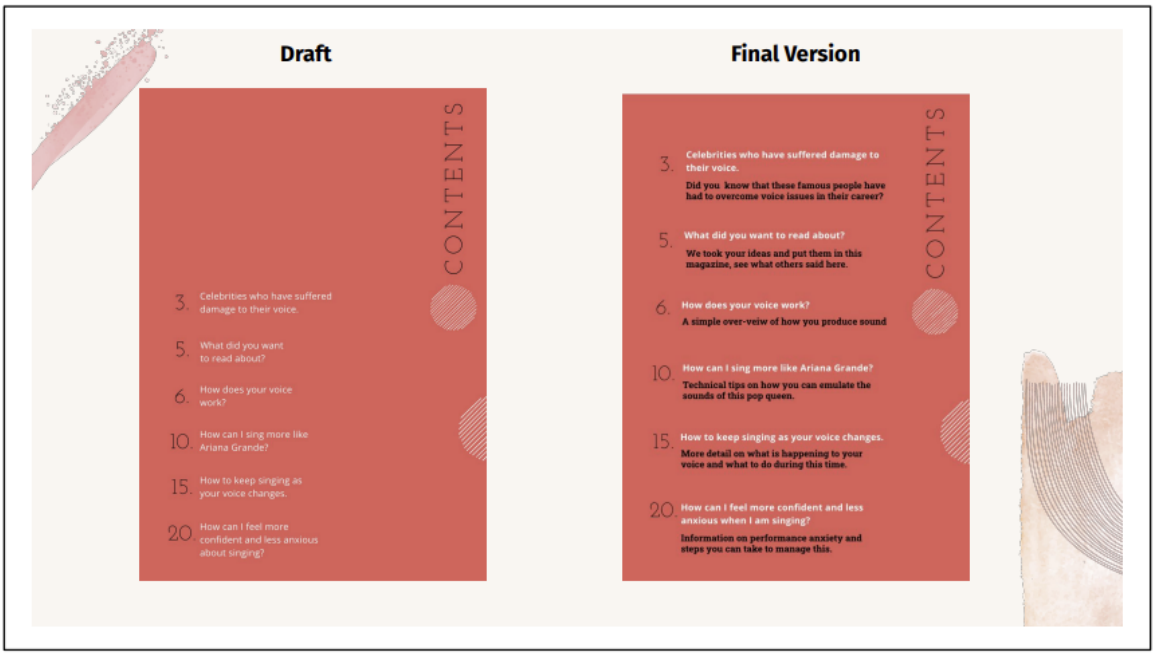
	Total of respondents answers	Percentages based on 83 respondents
Voice Change	7	8.40%
Voice Cracks	18	21.60%
Performance Anxiety	13	15.60%
Loss of higher range	12	14.40%
Difficulty Pitching	5	6.02%
Loss of power	4	4.80%
Airy/rough Voice	3	3.60%
Loss of confidence	16	19.20%
Pain	2	2.40%
Lack of control	2	2.40%
Dislike of own voice	5	6.02%
Managing lower range	1	1.20%
Voice stuck up in nose	1	1.20%
Not much of a deep voice	1	1.20%
Vocal Fatigue	1	1.20%
Register transition	2	2.40%
Vocal range	1	1.20%
Vocal fluctuations	1	1.20%
Vocal timbre	1	1.20%
Throat clearing	1	1.20%



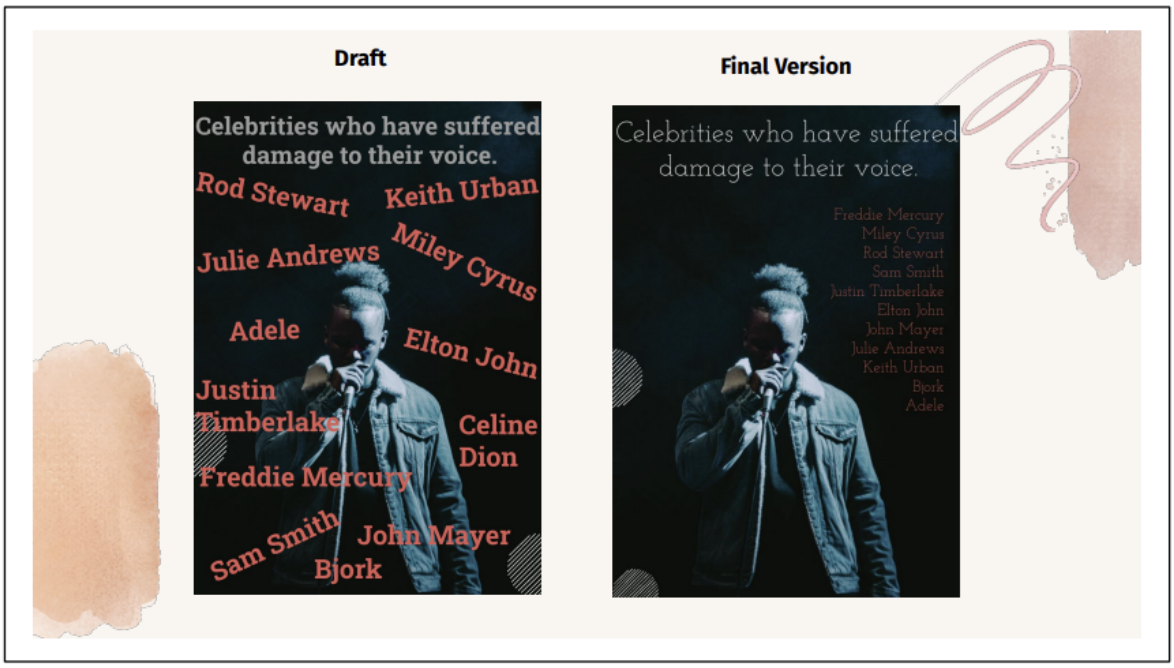
What content would you like to read in a magazine about how your voice changes as you grow up?	Is this content featured in the magazine?	Where is it represented in the magazine?
Requested Magazine Content		
Managing Performance Anxiety	Included	How can I feel more confident and less anxious about performing?
How does your voice change?	Included	Let's talk about how to keep singing as your voice changes
Managing voice cracks	Included	Voice cracks and how to keep your voice healthy
Why can't you keep a steady tone/pitch	Included	Let's talk about how to keep singing as your voice changes
Building confidence	Included	How can I feel more confident and less anxious about performing?
How to sing high	Not included	Will be included in second magazine
How to sing like Ariana Grande	Included	How can I sing more like Ariana Grande?
How deep will my voice get?	Not included	Will be included in second magazine
Singing can be hard and challenging	Included	Let's talk about how to keep singing as your voice changes
Why can't I feel confident?	Included	How can I feel more confident and less anxious about performing?
Why does my voice hurt?	Included	What happens to my voice as it gets older?
Why does it sound different on a computer than it does in my head?	Included	Why does my voice sound different to what I think on a recording?
How to keep a healthy voice	Included	Voice cracks and how to keep your voice healthy
How do we produce sound?	Included	How does your voice work?
Voice change and celebrities - damage	Included	Celebrities who have suffered damage to thier voice
Inspirational singers	Included	Celebrities who have suffered damage to thier voice
Changes you experience during puberty	Included	What happens to my voice as it gets older?
Standard voice ranges SATB	Not included	Will be included in second magazine
Basic vocal technique	Not included	Will be included in second magazine
A graph that shows the changes in pitch	Not included	Will be considered



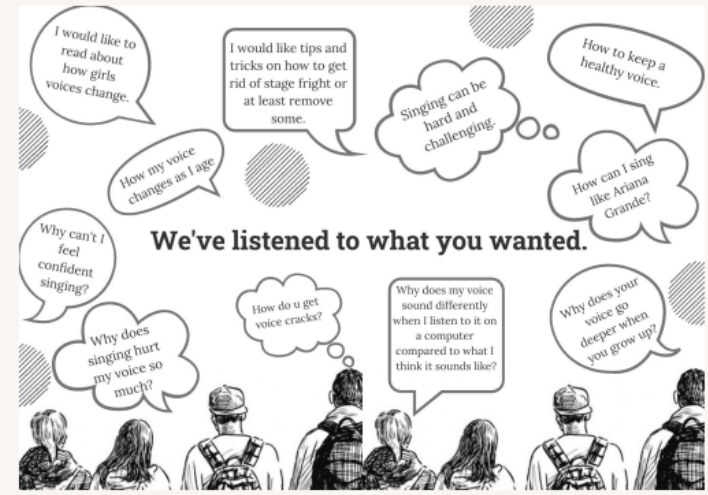
Changes in font colour and positioning



Additional information on what page includes

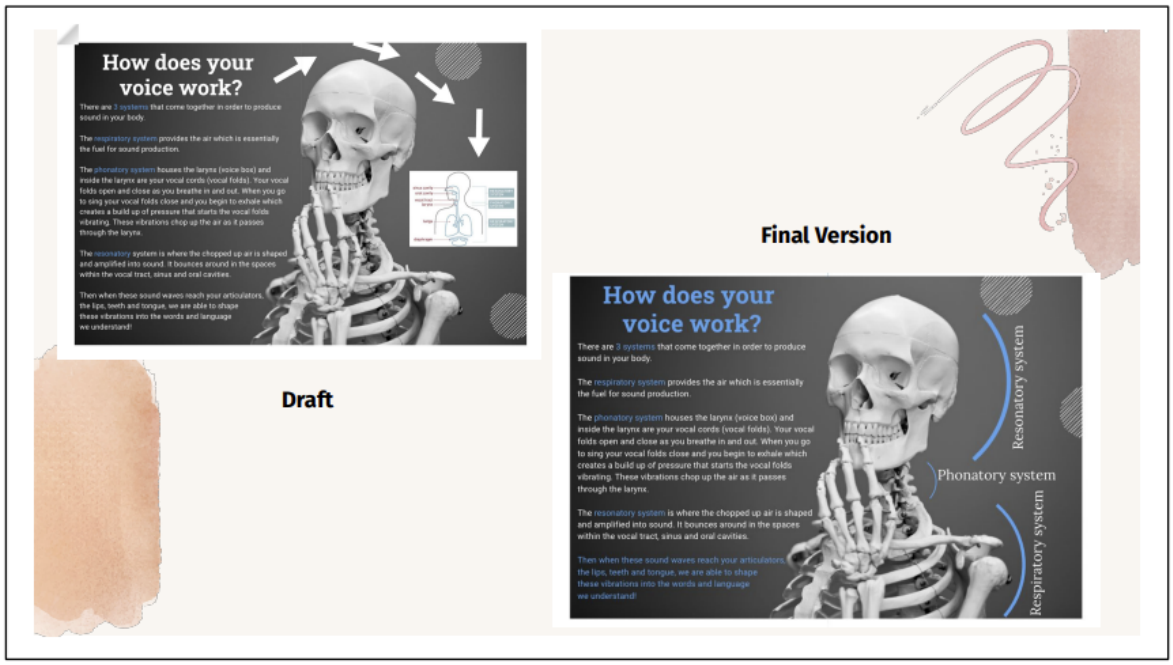


Re-formatting to make page less cluttered

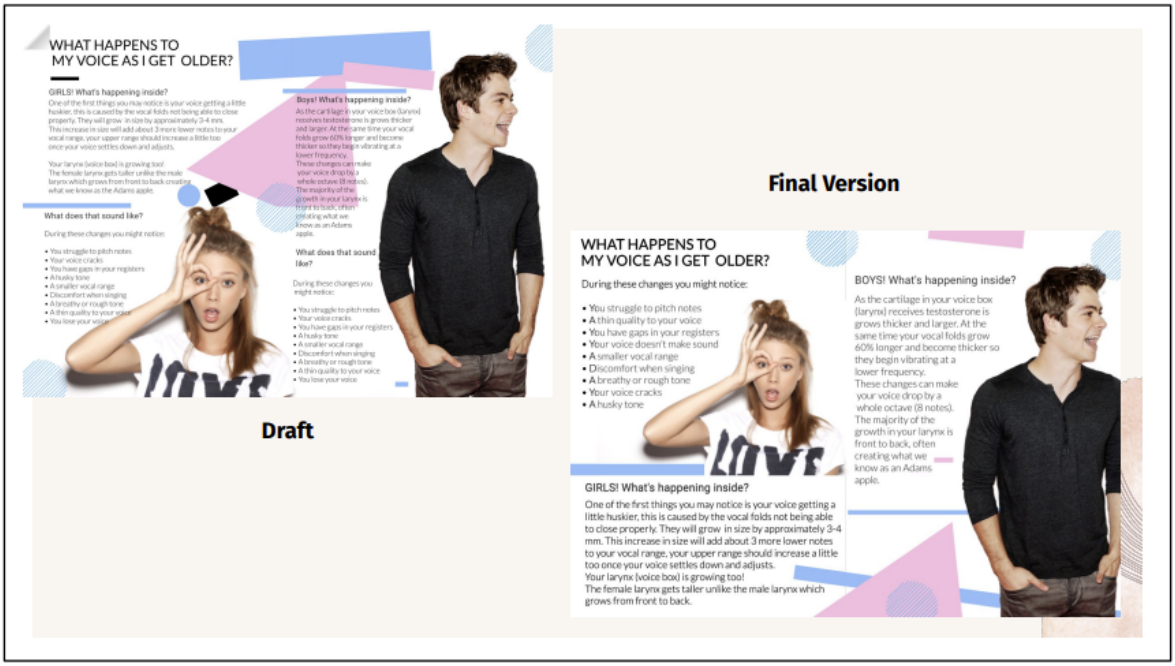


Final Version

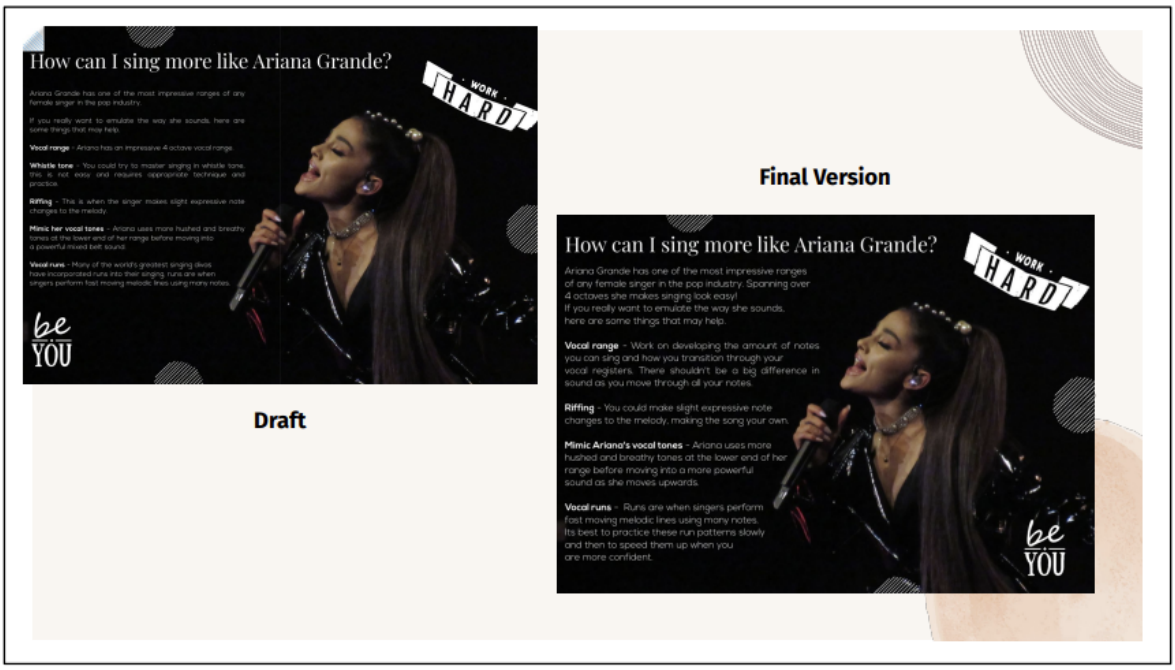
No changes - well received



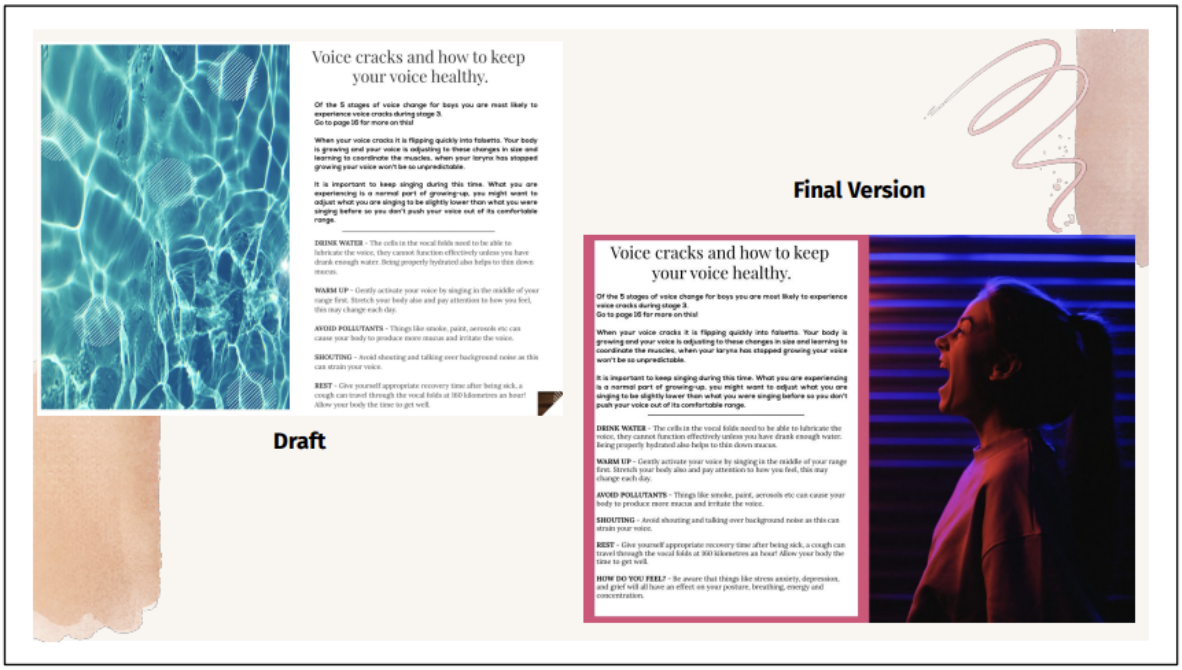
Simplified design and removal of picture, additions to labels



Duplicated information changed and font size increased
"Loss of voice"



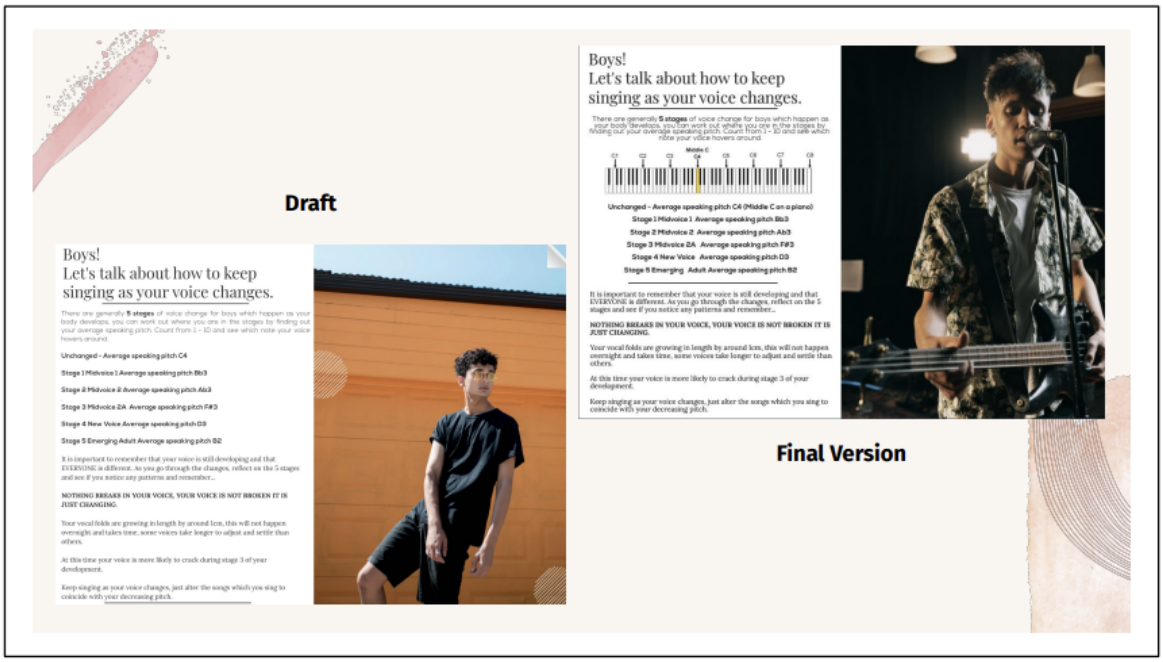
Larger font size removal of “whistle”



Change in image


Girls!
Let's talk about how to keep singing as your voice changes.
Draft
Final Version
Girls!
Let's talk about how to keep singing as your voice changes.

Larger font



How to make the stages of voice change accessible to a novice audience?

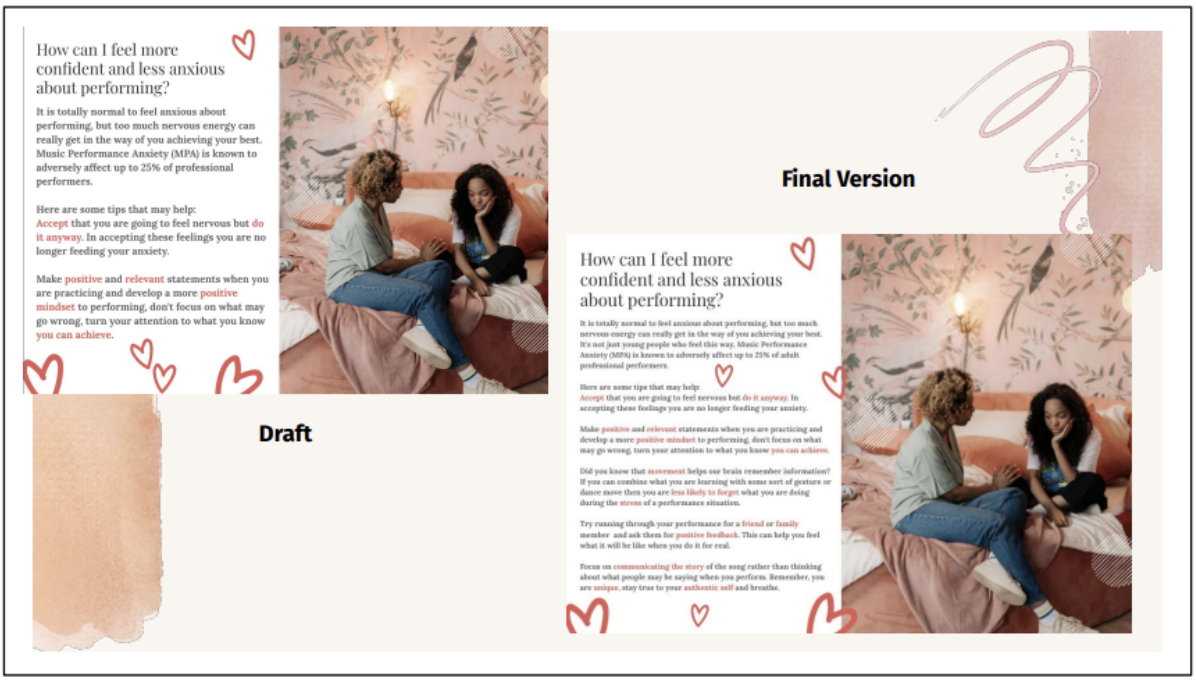
Draft



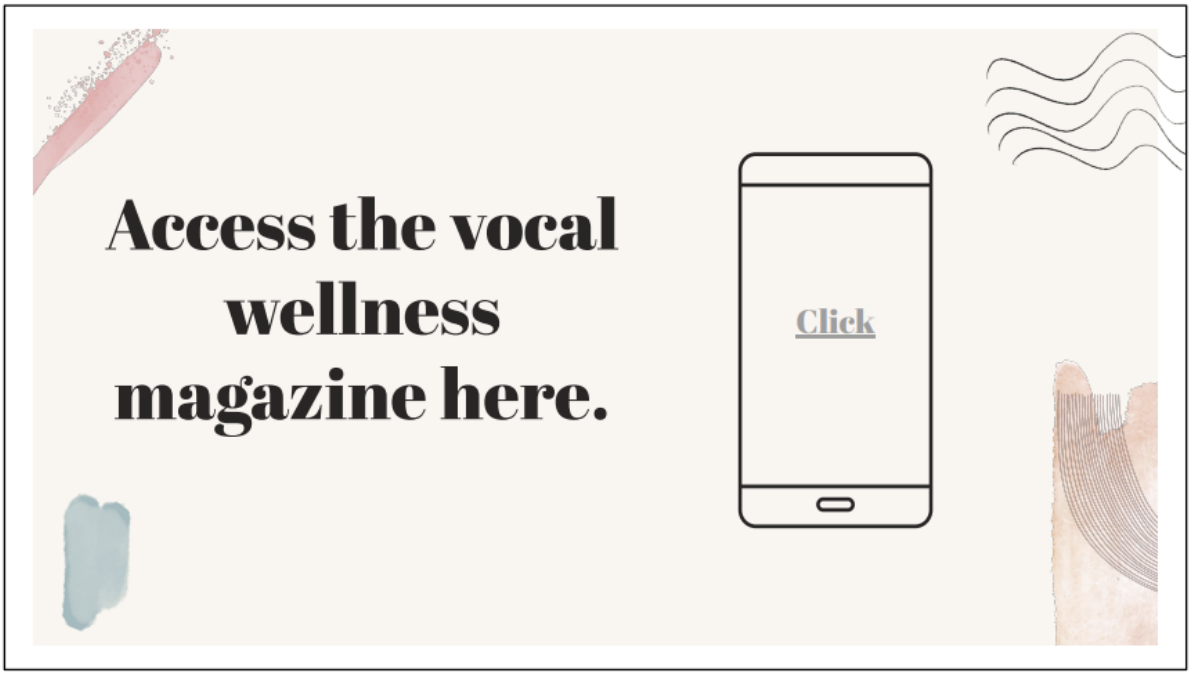
Final Version



Change in image



Additional information on action you can take


Access the vocal wellness magazine here.
Click



Further work to be done in this area with mental health - we are well placed to do this in our field

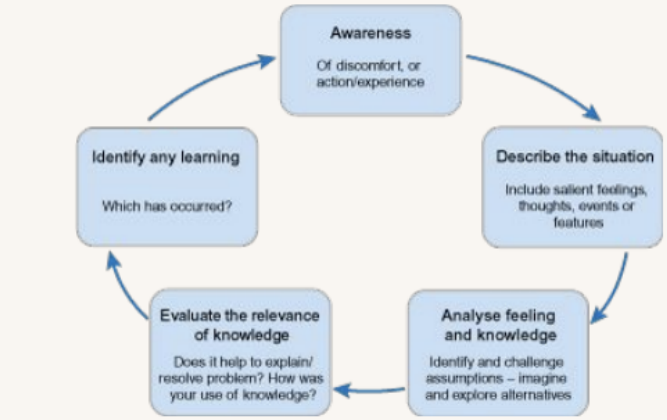
Mental health issues in adolescents is increasing "one fourth of youth experience a mental disorder during the past year, and about one third across their lifetimes". Merikangas et all 2022

Accessible Terminology & Language - how can this be made even more accessible

Personal Learning Outcomes
To broaden knowledge and understanding of adolescent voice change and wellness in music education and develop awareness of how best to support students during this time.
Development of computer design skills in creating meaningful and relevant digital resources.
To promote further dialogue and research in the area of female adolescent voice research with a dual focus on adolescent physical and mental development.

On the whole - ACHIEVED
More can be done now on promotion of adolescent voice/mental health

Reflection



Atkins and Murphy (1993) cyclical model

https://www.open.edu/openlearn/mod/oucontent/view.php?id=51386&section=4

Limitations - Felt one dimensional at times/not a strong enough idea or embedded in enough rigour - tip of the iceberg
Research could have been better
When analysing - looking beyond the obvious - i'm not certain i did.
A want to share all knowledge - does that leave me feeling fulfilled as a research practitioner? Yes because I can design higher level resources for others
I've learned a lot about myself - about prioritising "me time" which has benefits as a mum of young kids
Barriers to my own learning - best ways to learn
As practitioners we scratch the surface and thats both terrifying and empowering at the same time

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Appendix 1

Table 1. Cooper's Taxonomy of Literature Reviews

Characteristic	Categories
Focus	Research outcomes Research methods Theories Practices or applications
Goal	Integration (a) Generalization (b) Conflict resolution (c) Linguistic bridge-building Criticism Identification of central issues
Perspective	Neutral representation Espousal of position
Coverage	Exhaustive Exhaustive with selective citation Representative Central or pivotal
Organization	Historical Conceptual Methodological
Audience	Specialized scholars General scholars Practitioners or policymakers General public

From "Organizing Knowledge Synthesis: A Taxonomy of Literature Reviews," by H. M. Cooper, 1988, *Knowledge in Society, 1,* p. 109. Copyright by Springer Science + Business Media. Reprinted with permission of Springer Science + Business Media.

Appendix 2 - The table of data from Questionnaire 1

	Is there anything you find challenging about singing as you grow up?	Notes? Ideas?	What content would you like to read in a magazine about how your voice changes as you grow up?
PARTICIPANT 1	I find singing challenging because: 1. my voice is changing 2. I get voice cracks 3. I have stage fright.	Voice change (1), voice cracks (1), Performance Anxiety (1)	I would like tips and tricks on how to get rid of stage fright or at least remove some.
PARTICIPANT 2	I can't hit as many high notes as used to, and that i can't seem to hit the right notes even if I try my best. I also have many voice cracks if i try to hit specific notes, which makes it harder to actually sing.	Voice cracks (2), loss of higher range (1), difficulty pitching (1)	Things like how your vocal chords develop, why your voice gets deeper/higher depending on your gender, how does your body change the vocal chords, and why your voice changes as you grow up.
PARTICIPANT 3	Singing high and low notes. Personally I can't sing many octaves without singing fasellto or my voice sounding forced. My voice also sounds nasally and unclear so its not built for singing either.	Loss of range (2), loss of power (1), airy voice (1)?	How my voice changes as I age
PARTICIPANT 4	Not as confident anymore, deeper voice	Loss of confidence (1), lower range (1)	Getting voice cracks is normal
PARTICIPANT 5	I feel like because my voice has gotten lower as I've grown up and making higher pitched noises sometimes strains my voice, it ends up sounding bad and it hurts my throat. I also feel like because now I don't have a lot of control on how my voice sounds and how it comes out, it can crack or make weird noises without being able to control it.	Not sure how to use voice as it changes, pain in throat (1), loss of control (1), voice cracks (2)	I want to know how to keep a steady tone or pitch not just while singing but also talking so I don't hurt my throat or embarrass myself.
PARTICIPANT 6	i do not feel confident singing because i do not have a good voice and i am not confortable singing infront of ANYONE	Lack of confidence (2), not liking their voice (1)	getting voice cracks is normal
PARTICIPANT 7	Well for me no, but if someone's shy I guess the, being confident and there voice.	Lack of confidence (3)	I would like to read about getting voice cracks
PARTICIPANT 8	Voice deepening and cracking	Voice range getting lower (2), voice cracks (3)	How to sing and change tones easily and why our voices change
PARTICIPANT 9	im bad	What do they mean here? Voice sounds bad? They dont like thier voice?? (2)	it gets better
PARTICIPANT 10	high pitch singing voice, cracks	Use of higher register (2), voice cracks (4)	how you get voice cracks
PARTICIPANT 11	voice gets deeper, voice cracks	Could they mean that they dont know how to manage thier voice as it is now different to before? Voice cracks (5)	not many voice cracks, not that deep of a voice
PARTICIPANT 12	singing high pitch is kid of hard, and voice cracks.	Use of higher register (3), voice cracks (6)	how do u get voice cracks
PARTICIPANT 13	I am not good and I am not confident and very shy to sing to other people	Lack of confidence (4) in ability, performance anxiety (2)	How to get more confident and get good
PARTICIPANT 14	As I grow up my voice has started to break when I sing high. Sometimes I start going out of pitch when I sing high.	Voice "breaks" when trying to sing high (4), difficulty pitching (2)	In a magazine. Would like to see solutions to how to rectify your voice breaking when you sing hgh as you grow. Also I would like to see some techniques that can be used to sing high.
PARTICIPANT 15	When I grow up, I personally feel that my voice sounds more sandier which I kind of dislike, and makes me pretty insecure about. Especially when I try and sing in a high note, it sounds pretty bad.	"Sandy" voice - rough tone? (2)Breathy?	How to get a husky sort of voice.
PARTICIPANT 16	Ye, Voice cracks, My voice stuck up in my nose, Breath	Voice stuck up in nose? What is causing this? FURTHER RESEARCH HERE (1)	How to sing in a higher pitch
PARTICIPANT 17	I used to sound like eeeeeeeeeeeeeeeee and now I sound like yAHHHOUAHHAIUE	Are they referencing voice cracks here? (5)	How to sing like ariana grande
PARTICIPANT 18	Yes my voice cracks a lot and I can not sing high notes like I used to be able to.	Voice cracks (6) loss of higher registers (5)	I would like to learn how to make my voice smooth whilst going throughout my voice change.
PARTICIPANT 19	voice crack (I used to sound like this eeeeeeeeeeeeeeeeeeeeeeeeeee, and now i sound like this eeeafebeeeeeeeedgeeeegegehegeee	Are they referencing voice cracks here? (7)	how can I fix a voice crack
PARTICIPANT 20	not much of a deep voice	Are they wanting thier voice to be lower? Pressure of peers to conform to the norm?? (1)	how deep will my voice get, what is the average amount of voice crack will i get
PARTICIPANT 21	I don't want to embarrass myself in front of my colleges and I think that my voice is absolutely terrible and I don't want to annoy other people with my singing and I feel like i don't want to ruin my reputation.	INTERESTING HEREDOESN'T WANT TO RUIN THIER REPUTATION WITH PEERS THINKS VOICE IS TERRIBLE - WHY? (2)	I would want it to display how annoying and hard it is to sing and people also to learn how important singing can be in different forms
PARTICIPANT 22	Everything	Where to start here?	how it gets deeper
PARTICIPANT 23	Getting a deeper voice and beginning puberty.	Managing new voice and challenges puberty presents (2)	How your voice changes
PARTICIPANT 24	Voice gets tired quickly	Vocal fatigue (1)	Why does your voice go deeper when you grow up?
PARTICIPANT 25	voice cracks when i'm singing a high note	Voice cracks in higher register (8)	why does my voice change?
PARTICIPANT 26	Why I'm not as confident?	Loss of confidence (5)	Why can't I feel confident singing?

	Is there anything you find challenging about singing as you grow up?	Notes? Ideas?	What content would you like to read in a magazine about how your voice changes as you grow up?
PARTICIPANT 27	My low pitch voice doesn't really go on the song rhythm-	Not sure how to read this one - pitch matching? (2)	Different volumes in singing like (high pitch and low pitch)
PARTICIPANT 28	singing in a high voice bc i cant i have a deep voice and if i try it hurts my voice	Loss of higher register (6), pain in voice (2)	why does it hurt my voice so much
PARTICIPANT 29	I find that I can't at all get a high pitch when singing	Loss of higher register (7)	Why does my voice sound differently when I listen to it on a computer compared to what I think it sounds likes.
PARTICIPANT 30	Voice Cracks, Not singing in pitch, Not singing in the right melody, thinking that your voice matches the melody but when you record yourself singing it's not right	Lots going on here and this is quite well articulated - Voice cracks (9), pitching (3)	How to sing in a perfect pitch, How to sing on time, How high a teenage voice can go
PARTICIPANT 31	Singing in front of people and high pich..	Confidence to sing infront of an audience and ability to sing higher (2)	Why does it change and how and why….
PARTICIPANT 32	My voice became a little better as I grew up, my voice became like not that bad but then suddenly my voice became bad again like voice cracks or something	Are they saying here that the changing voice has stopped thier progress?	about voice cracks probably
PARTICIPANT 33	high notes	Higher register (8)	how to keep your voice healthy and why we have voice cracks
PARTICIPANT 34	my voice keeps cracking when i do higher notes and it is very sad	Voice cracks (10), loss of higher range (8),	i want to know how to do high notes with out my voice cracking :)
PARTICIPANT 35	My confidence and singing in front of other people.	Confidence (6) and performance anxiety (3)	How to make your voice smooth and learning about the voice, learning about the pharynx and how we make sound with our mouths
PARTICIPANT 36	Getting nervous when singing in front of a group of people, and fear of messing up when performing.	Performance anxiety (4)	How your tone changes, your voice, and voice cracks.
PARTICIPANT 37	How to stop voice cracking?	Voice cracks (11)	How to keep your voice healthy and how to reduce the amount of voice cracks when singing.
PARTICIPANT 38	My confidence, I feel singing Infront of many people is challenging and my voice is not that good and my voice sometimes breaks while singing	Loss of confidence (7) and confidence in voice not cracking (12)	How to improve you voice
PARTICIPANT 39	The voice changes.	Voice change (3)	Voice changes and celebrities.
PARTICIPANT 40	nervous	Performance anxiety (5)	I don't know
PARTICIPANT 41	I find singing in front of other people challenging. I think its a bit awkward and I don't like to sing in front of others especially not on my own.	Performance anxiety (6)	I think it would be cool to see some content about techniques to improve your singing or different types of vocal problems and what causes them
PARTICIPANT 42	keeping up with the pace	?? Learning songs perhaps? or keeping up with the voice changes? (4)	keep your voice healthy
PARTICIPANT 43	singing ithout getting a voice crack and also to sing infront of an audiance.	Voice cracks (12), performance anxiety (7)	ho to keep your vouce helthy and sing smoothly.
PARTICIPANT 44	singing high notes and also singing in front of people	Higher register (9), performance anxiety (8)	voice breaks
PARTICIPANT 45	The fear of not being good enough or being judged.	Low self confidence (8)/performance anxiety (9)	What happens to your voice as you grow up?
PARTICIPANT 46	I don't particularly like the sound of my voice myself.	No liking how thier voice sounds (3)	How your voice changes as you grow up & how to utilize voice, pitch etc. in conversation, public speaking etc.
PARTICIPANT 47	I have a confidence issue	Low confidence (9)	I want to know what happens to my voice when i grow up
PARTICIPANT 48	singing in front of people	Performance anxiety (10)	Voice cracks
PARTICIPANT 49	my mind gets in the way of me singing and the fear of being judged. my mind is telling me to not sing because i might mess up and others will laugh. and i dont know if my singing is any good.	Performance anxiety (11)	how to get better at singing? - what did singers do after they lost there amazing singing?
PARTICIPANT 50	Its that I dont know what to do with my voice. Like in how to sing using my voicee	Have they aovided singing - do they not know how to use thier "new voice" have they never trained? (4)	Voice cracks, vocalists who had voice damage in their past.
PARTICIPANT 51	mostly anxiety stops me from using my voice a lot, but I do feel that it was potential	Performance anxiety (12)	Maybe ways to train your voice to be stronger and better? and how to prevent voice cracks and vocal damage
PARTICIPANT 52	people keep telling me I have a good voice, but im never sure about it	Lack of confidence in voice (10)	I guess voice therapy? because of my gender and such
PARTICIPANT 53	I don't like the sound of my voice, when I try singing, it feels like I'm croaking or something, and the only way I can make it powerful is by screaming. I feel like it will get deeper or more croaky in the future.	Lack of power (2), husky tone (2)	I guess how to make your voice more powerful, because I feel like my voice is very weak.

	Is there anything you find challenging about singing as you grow up?	Notes? Ideas?	What content would you like to read in a magazine about how your voice changes as you grow up?
PARTICIPANT 54	i like songs and singing to myself but when i do it out loud i feel weird and i feel people are going to judge me if i do bad but also it feels weird to sing too, but i like singing in groups it is fun but then also it kinda feels weird, it feels like you are hearing your own voice (cringe)	Lack of confidence (11) in vocal ability	I would like to read about many different day to day things that happen such as: voice cracks because they happen a lot and i have no idea why they happen, also i like reading about inspirational moments in a singers life and i feel that could motivate me.
PARTICIPANT 55	I dont really like the sound of my singing voice and i have never enjoyed singing to people. I myself wouldnt sing but i am not sure about others. This means i dont like to sing and wouldnt want to do it ever.	Does not like the sound of thier voice - I always wonder where this stems from - other peoples opinion? (4)	voice cracks
PARTICIPANT 56	cant singing thin voice	?? Lack of power (3)	medical stuff and succes stories
PARTICIPANT 57	My voice changes, so I have trouble reaching high pitches.	Managing voice change (5)	I would like to read about how I can maintain singing in a high pitch even though my voice is changing.
PARTICIPANT 58	I get quite a few voice cracks nowadays because of my age but apart from that I like my voice and what I can do with it.	Has confidence just need help managing voice cracks (13)	When voice cracks usually stop happening.
PARTICIPANT 59	It gets harder to keep the same note when singing for longer periods of time.	Pitch fluctuation (3)	Which celebritys that have had problems with thier voice when they were growing up.
PARTICIPANT 60	when i was younger i struggles with singing in my chest voice and i would underestimate it and just switch to a head voice.Confidence for me was really strong in singing in my old school but i found it a bit difficult when i moved so now my voice is getting stronger and i am exploring more with my chest voice.	Was struggling a little with confidence - how to manage "chest" and "head voice" (1)	i would like to read about how girls voices changing.
PARTICIPANT 61	voice cracks, cant sing in high pitched, harder to sing in many different pitches, lack of confidence,	Voice cracks (14), loss of higher pitch (10), loss of confidence (12)	voice cracks, how to improve singing
PARTICIPANT 62	i dont enjoy singing, i lack confidence, i hate how my voice sounds, i have TO MANY voice cracks when singing.	Voice cracks (15), lacks confidence (13), doesn't like sound of thier voice (5)	changes regarding puberty
PARTICIPANT 63	I am not confident in singing because, I have voice cracks and i haven't had the chance to learn how to sing only in elementary	Voice cracks (16), confidence (14), lack of training	what happens to out voices as we grow up and why?
PARTICIPANT 64	I am not confident when I sing and that I have stage fright	Lack of confidence (15), performance anxiety (13)	Ik that our vocies change when we grow up
PARTICIPANT 65	When our voice changes it makes it harder to sing songs that are higher/lower knowing the range of the voices would help me choose a range that is comfortable for us to sing.	Wants to know more about vocal range during change (1)	I would like to know what the range of each voice (SATB) and how to use that range when singing songs
PARTICIPANT 66	I used to like singing as I was a child, now my voice has changed and I usually tend to sing medium low more than high, I can't control my voice when it's higher and when I sing for a long time holding that note gets harder. I'm not sure now if my singing really is as good as I think or if it isn't.	Enjoyed singing pre voice change - now navigating pitch (4), voice control (2)	Maybe how to control your voice more on notes and taking breaths. How to control it in high notes and long notes, and using your stomach because I've heard that helps.
PARTICIPANT 67	no not really. I'm just not interested in singing.	No interest in singing	I wouldn't read a magazine about my voice
PARTICIPANT 68	voice changing a lot	Voice change (6)	why does it change
PARTICIPANT 69	my voice goes deeper	Managing voice change (7)	the voice goes deeper and it changes
PARTICIPANT 70	I find going into high pitches hard as sometimes this can make my voice crack	Loss of higher register (11) voice cracks (17)	I would like to read about how you could change your voice in such a way that even when you're 18 you can
PARTICIPANT 71	The changes in voice when I have to change the pitches I usually sing	Managing transitions (2)	How it changes, why it changes, how a voice can become lower and / or higher at a certain point
PARTICIPANT 72	I don't know	No answer	Content that inform me on what happens to my voice.
PARTICIPANT 73	The pitch	Pitching (5)	a graph about changes in the pitch from 7-18
PARTICIPANT 74	The rhythm in some songs	Rhythm matching/learning	Exercises to practice different pitches
PARTICIPANT 75	Something I find challenging is my voice change. It's not that much for me but sometimes my voice does sound different one day compared to another day again its not that much but is still noticable (hopefully you could understand)	Daily fluctuation of voice change (1)	Something I would like to see in your magazine is how and why our voice changes as I personally do not know and another thing I would like to see in your magazine is how to work with our changing voice. These 2 things would really help me personally.
PARTICIPANT 76	Not really	No challenges :)	Why does your voice change?
PARTICIPANT 77	Growing up i didn't have a very confident voice and struggled communicating. So in general when it came to singing, it wasn't really my best	Low confidence (16)	How can you change your voice willingly through certain techniques or practices

	Is there anything you find challenging about singing as you grow up?	Notes? Ideas?	What content would you like to read in a magazine about how your voice changes as you grow up?
PARTICIPANT 78	Yes ,I can not go to high	Loss of higher register (12)	I want to read about how low and high did my voice change
PARTICIPANT 79	No, I just started singing about 2-3 years ago	No challenges :)	What happens and how
PARTICIPANT 80	My voice has changed or maybe its the fact that when you are young no matter how bad you sing, people still praise and compliment you but as you grow older you are expected almost to sing good, if you are singing.	Now this is interesting - identifying that as a younger child it is ALL praise and that maybe now they feel like they fall short or are they not as good...?	What to do about it? How to make your voice sound better even as it changes?
PARTICIPANT 81	I think sounding good	Vocal timbre (1)	I'm not sure
PARTICIPANT 82	I have been getting more voice cracks and recently my voice sounds a bit more dry and i find myself having to clear my throat a lot when I speak.	Voice cracks (18), hoarseness (3), throat clearing (1)	maybe some things you can do to stop your voice from cracking (like drinking water or vocal exercises i dont know what works), or maybe some ways you can change/control your voice
PARTICIPANT 83	I find that singing can be nerveracking, when I "sing" I wouldnt be trying but more or less messing around. I enjoy proper singing. But my voice as I grow up is changing and I cant seem to figure out how to get my voice to stop being so weak and crask all the time. if I singing at a normal volume them I sound fine. But I cant seem to get any energ or project my voice without it cracking (esspecialy when im signing is a higher pitch). So I sing quietly.	Loss of power/projection especially in higher registers (4)	how it changes, if singing everyday would acctualy make a difference or do we just have till our voices have stopped changing. Is there anyway for us to help it during these times. Why our voice cracks and how to project.

	Total of respondents answers	Percentages based on 83 respondents	Requested Magazine Content
Voice Change	7	8.40%	Managing Performance Anxiety
Voice Cracks	18	21.60%	How does your voice change?
Performance Anxiety	13	15.60%	Managing voice cracks
Loss of higher range	12	14.40%	Why can't you keep a steady tone/pitch
Difficulty Pitching	5	6.02%	Building confidence
Loss of power	4	4.80%	How to sing high
Airy/rough Voice	3	3.60%	How to sing like Ariana Grande
Loss of confidence	16	19.20%	How deep will my voice get?
Pain	2	2.40%	Singing can be hard and challening
Lack of control	2	2.40%	Why can't I feel confident?
Dislike of own voice	5	6.02%	Why does my voice hurt?
Managing lower range	1	1.20%	Why does it sound different on a computer than it does in my head?
Voice stuck up in nose	1	1.20%	How to keep a healthy voice
Not much of a deep voice	1	1.20%	How do we produce sound?
Vocal Fatigue	1	1.20%	Voice change and celebreties - damage
Register transition	2	2.40%	Inspirational singers
Vocal range	1	1.20%	Changes you experience during puberty
Vocal fluctuations	1	1.20%	Standard voice ranges SATB
Vocal timbre	1	1.20%	Basic vocal technique
Throat clearing	1	1.20%	A graph that shows the changes in pitch

Appendix 3 - Letter of consent from school

ABA Oman International School
PO Box 372, PC 115,
Madinat Al Sultan Qaboos,
Muscat, Sultanate of Oman
Tel: (968) 24955800
Fax: (968) 24603544
www.abaoman.org

ABA OMAN INTERNATIONAL SCHOOL

المدرسة الأمريكية البريطانية
ص.ب: ٣٧٢، الرمز البريدي ١١٥
مدينة السلطان قابوس،
مسقط، سلطنة عمان
تيلفون: ٠٠٩٦٨٢٤٩٥٥٨٠٠
فاكس: ٠٠٩٦٨٢٤٦٠٣٥٤٤

June 6th, 2022

To Whom it May Concern,

I give permission for Mrs Zita Gange to complete a work-based project as part of her Vocal Pedagogy MA Studies with the provisional title "Your Voice - Positive self-concept as you train the voice through adolescent voice change". This will involve creating a digital wellness magazine for students who will be part of this action-based research project.

Yours sincerely,

Craig Williamson
Head of School

المدرسة الأمريكية - البريطانية
P.O. Box 372
Madinat Qaboos
Postal Code 115
Sultanate of Oman
AMERICAN BRITISH ACADEMY

Appendix 4 - Ethics consent forms

RESEARCH STUDY

Students of Sing! at ABA are invited to participate in a research study. Mrs Zita Gange is currently completing her final module for a Masters Degree in Vocal Pedagogy and is designing a magazine which aims to address voice change during adolescence. Participants will be part of this action research project and will be asked to give feedback on drafts of the magazine, shaping its design and content. She wants to cover all of the aspects of vocal health that are important to students. Participation is entirely voluntary - you do not have to take part. Everything you say will be confidential and anonymous - she won't know who you are. If you think of anything that you want to discuss with someone separately, you are very welcome to come and see her, or speak to your advisor or anyone else at school or home.

You will be asked to read the magazine and to complete a questionnaire on what you think about the content.

If you do NOT want to participate please complete the form below:

I, …… (please print)

Do not give consent on behalf of my child ……. to participate in this research project**.**

Contact email address …… (please print)

Signed:…… Date:.....

SUBJECT INFORMATION SHEET

You are invited to take part in a research project which will help design a magazine for students on voice change and self-confidence during adolescence. The research study is engaged with building a positive self-concept as you train the voice through adolescent voice change. The aim is to create a magazine resource to support and assist your knowledge and understanding during this transition. Participants will take part in questionnaires where they will share what they think about the magazine, the thoughts and ideas will help create this magazine.

The study is being conducted by Mrs Zita Gange, full time teacher of MYP music at ABA International School, Oman. It forms the basis of a Masters Degree in Vocal Pedagogy and meets the ethical requirements of University of Wales Trinity St David.

If you agree to participate in this study, you will be asked to complete a questionnaire at the start and end of the process. There are no obvious risks involved in this research which will be carried out at the ABA school in an allocated music room.

All collected data from the study will be strictly confidential and only Mrs Zita Gange will have direct access to information about the participants. A report of the study will be submitted for assessment but individual participants will not be able to be identified from such a report. Only an allocated number will identify each subject and information will be stored in a password protected device.
Participation in this study is entirely voluntary and withdrawal will not jeopardise your future academic progress in any way.

When you have read this information Zita Gange will be happy to discuss it with you further and answer any questions that you may have about the study. If you would like to know more at any stage, please feel free to contact Zita Gange on zgange@abaoman.org

This information sheet is for you to keep.

Appendix 5 - Signed Ethics Form

APPLICATION FOR ETHICAL APPROVAL

In order for research to result in benefit and minimise risk of harm, it must be conducted ethically. A researcher may not be covered by the University's insurance if ethical approval has not been obtained prior to commencement.

The University follows the OECD Frascati manual definition of research activity: "creative work undertaken on a systematic basis in order to increase the stock of knowledge, including knowledge of man, culture and society, and the use of this stock of knowledge to devise new applications". As such this covers activities undertaken by members of staff, postgraduate research students, and both taught postgraduate and undergraduate students working on dissertations/projects.

The individual undertaking the research activity is known as the "principal researcher".

Ethical approval is not required for routine audits, performance reviews, quality assurance studies, testing within normal educational requirements, and literary or artistic criticism.

Please read the notes for guidance before completing ALL sections of the form.

This form must be completed and approved prior to undertaking any research activity. Please see Checklist for details of process for different categories of application.

Delete the Guidance Notes at the end of the form BEFORE submitting your application

SECTION A: About You (Principal Researcher)

1	**Full Name:**		**Zita Clare Gange**			
2	**Tick all boxes which apply:**		**Member of staff:**	☐	**Honorary research fellow:**	☐
3	**Undergraduate Student**	☐	**Taught Postgraduate Student**	☒	**Postgraduate Research Student**	☐
4	**Institute/Academic Discipline/ Centre:**		**WAPPAR**			
5	**Campus:**		**Carmarthen**			
6	**E-mail address:**		**Your email**			

7	**Contact Telephone Number:**	**+968 99026731**
	For students:	
8	**Student Number:**	**2016776**
9	**Programme of Study:**	**MA in Professional Practice (Voice Pedagogy)**
10	**Director of Studies/Supervisor:**	**Annette Fillery Travis**

SECTION B: Approval for Research Activity

1	**Has the research activity received approval in principle? (please check the Guidance Notes as to the appropriate approval process for different levels of research by different categories of individual)**	**YES**	☒	**NO**	☐
				Date	
2	**If Yes, please indicate source of approval (and date where known):** ***Approval in principle must be obtained from the relevant source prior to seeking ethical approval***	**Research Degrees Committee**	☐		
3		**Institute Research Committee**	☐		
4		**Other (write in) WAPPAR Ethics Board Representative**	☒		

SECTION C: Internal and External Ethical Guidance Materials

	Please list the core ethical guidance documents that have been referred to during the completion of this form (including any discipline-specific codes of research ethics, and also any specific ethical guidance relating to the proposed methodology). Please tick to confirm that your research proposal adheres to these codes and guidelines.	
1	**UWTSD Research Ethics & Integrity Code of Practice**	☒
2	**UWTSD Research Data Management Policy**	☒

3		☐

SECTION D: External Collaborative Research Activity

1	Does the research activity involve collaborators outside of the University?		YES	☐	NO	☒
2	If Yes, please provide the name of the external organisation and name and contact details for the main contact person and confirmation this person has consented to their personal data being shared.as part of this collaboration.					
3	Institution					
4	Contact person name					
5	Contact person e-mail address					
6	Has this individual consented to sharing their details on this form?		YES	☐	NO	☐
7	Are you in receipt of a KESS scholarship?		YES	☐	NO	X
8	Is your research externally funded		YES	☐	NO	X
9	Are you specifically employed to	Voluntary	YES	☐	NO	X

undertake this research in either a

10	paid or voluntary capacity?	Employed	YES	☐	NO	X
11	Is the research being undertaken within an existing UWTSD Athrofa Professional Learning Partnership (APLP)	If YES then the permission question below does not need to be answered.	YES	☐	NO	X
12	Permission to undertake the research has been	(If YES attach copy) If NO the	YES	☐	NO	X

	provided by the partner organisation	**application cannot continue**				

undertake this research in either a

Where research activity is carried out in collaboration with an external organisation

13	**Does this organisation have its own ethics approval system?**	**YES**	☐	**NO**	**X**
14	**If Yes, please attach a copy of any final approval (or interim approval) from the organisation**				

SECTION E: Details of Research Activity

1	**Indicative title:**	**A research study into female adolescent voice change in relation to positive self-concept**		
2	**Proposed start date:**	**Dec 2021**	**Proposed end date:**	**July 2021**
3	**Introduction to the Research (maximum 300 words)** **Ensure that you write for a <u>Non-Specialist Audience</u> when outlining your response to the three points below:** • ***Purpose of Research Activity*** • ***Proposed Research Question*** • ***Aims of Research Activity*** • ***Objectives of Research Activity*** **Demonstrate, briefly, how <u>Existing Research</u> has informed the proposed activity and explain** • ***What the research activity will add to the body of knowledge*** • ***How it addresses an area of importance.***			

4	**Purpose of Research Activity** **To extend knowledge and understanding and to develop new teaching methods in regards to adolescent vocal development and positive self concept. In her book Teaching Outside the Voice Box, Dr Bridget Sweet (2019) addresses a number of points that are specific to female adolescent vocal development. There have been remarkable leaps forward regarding research into our understanding of how the female voice develops during this time, however Sweet identifies many areas where these physical and mental changes can affect positive self-concept and I believe as vocal educators there is potential for greater research in this area.**

5	**Research Question** **How might we support female singers in relation to positive self-concept as they navigate adolescence?**
6	**Aims of Research Activity** **To broaden my knowledge and understanding of how the female adolescent voice changes and how this may affect students positive self-concept** **To analyse and reflect on the latest research and studies in this area and consider how this may be applied to to my teaching and learning in order to best support students during this transition.** **(this box should expand as you type)**
7	**Objectives of Research Activity** **Implement a research study into the area of female adolescent voice change by applying new teaching methods which were developed during module 5 to a teaching setting. Survey the students at the start and end of the teaching cycle to test the impact of the teaching methods.** **(this box should expand as you type)**
8	**Proposed methods (maximum 600 words)** **Provide a brief summary of all the methods that may be used in the research activity, making it clear what specific techniques may be used. If methods other than those listed in this section are deemed appropriate later, additional ethical approval for those methods will be needed.**
9	**Mixed methods:** **1) Observation in sessions, this will be videoed for critical analysis and reflection with additional notes taken during session. Observations will be conducted using a structured template to enable consistency.** **2) A Reflective Diary will be used throughout the session in order to deconstruct and evaluate my practice.** **3) Qualitative Questionnaire to participants – This will be a qualitative questionnaire designed to elicit rich data. For structure and consistency, I will use semi structured questionnaires.** **4) Quantitative Questionnaire using the Likert Scale – this will give quantifiable data on the scale of improvements made.**

10	**Location of research activity** **Identify all locations where research activity will take place.**
11	**ABA International School Oman** **(this box should expand as you type)**
12	**Research activity outside of the UK** **If research activity will take place overseas, you are responsible for ensuring that local ethical considerations are complied with and that the relevant permissions are sought. Specify any local guidelines (e.g. from local professional associations/learned societies/ universities) that exist and whether these involve any ethical stipulations beyond those usual in the UK (provide details of any licenses or permissions required). Also specify whether there are any specific ethical issues raised by the local context in which the research activity is taking place, for example, particular cultural and/or legal sensitivities or vulnerabilities of participants.**
13	**I will follow the procedures and practices stated in the school child protection handbook which is aligned with Omani Law, United Nations Rights of the Child and International School expectations worldwide. All staff employed at ABA must report suspected incidents of child abuse or neglect whenever the staff member has reasonable cause to believe that a child has suffered, or is at risk of suffering abuse or neglect. Reporting and follow up of all suspected incidents of child abuse or neglect will be in accordance with Omani Law and the child protection procedures resulting from the school policy statement.** **I have sought approval from head of school and the school counselor in regards to my research topic and student involvement (evidence attached)** ***(this box should expand as you type)***

14	**Use of documentation not in the public domain:** **Are any documents <u>NOT</u> publicly available?**	**NO**	☒
		YES	☐

15	**If Yes, please provide details here of how you will gain access to specific documentation that is not in the public domain and that this is in accordance with prevailing data protection law of the country in question and England and Wales.** ***(this box should expand as you type)***

SECTION F: Scope of Research Activity

1	Will the research activity include:	YES	NO
2	Use of a questionnaire or similar research instrument?	X	☐
3	Use of interviews?	x	
4	Use of diaries?	X	☐
5	Participant observation with their knowledge?	X	☐
6	Participant observation without their knowledge?	☐	X
7	Use of video or audio recording?	X	
8	Access to personal or confidential information without the participants' specific consent?	☐	X
9	Administration of any questions, test stimuli, presentation that may be experienced as physically, mentally or emotionally harmful / offensive?	☐	X
10	Performance of any acts which may cause embarrassment or affect selfesteem?	☐	X
11	Investigation of participants involved in illegal activities?	☐	X
12	Use of procedures that involve deception?	☐	X
13	Administration of any substance, agent or placebo?	☐	X
14	Working with live vertebrate animals?	☐	X

15	**Other primary data collection methods, please explain in this box For example, 'focus groups'. Please indicate the type of data collection method(s) in this box and tick the accompany box.**	☐	☐
16	**Details of any other primary data collection method:** **(this box should expand as you type)**		

If NO to every question, then the research activity is (ethically) low risk and may be exempt from some of the following sections (please refer to Guidance Notes).

If YES to any question, then no research activity should be undertaken until full ethical approval has been obtained.

SECTION G: Intended Participants

1	**Who are the intended participants:**	**YES**	**NO**
2	**Students or staff at the University?**	☐	**X**
3	**Adults (over the age of 18 and competent to give consent)?**	☐	**X**
4	**Vulnerable adults?**	☐	**X**
5	**Children and Young People under the age of 18? (Consent from Parent, Carer or Guardian will be required)**	**X**	
6	**Prisoners?**	☐	**X**
7	**Young offenders?**	☐	**X**
8	**Those who could be considered to have a particularly dependent relationship with the investigator or a gatekeeper?**	☐	**X**
9	**People engaged in illegal activities?**	☐	**X**
10	**Others (please identify specifically any group who may be unable to give consent) please indicate here and tick the appropriate box.**	☐	**X**

11	**Other – please indicate here:** **(this box should expand as you type)**		
12	**Participant numbers and source** **Provide an estimate of the expected number of participants. How will you identify participants and how will they be recruited?**		
13	**How many participants are expected?**	**Approximately 4-8 participants** ***(this box should expand as you type)***	

14	**Who will the participants be?**	**Participants will be consenting music students grades 6-8 who participate in the school singing after school program.** **I must obtain permission from the parent or principal carer for the student to be part of the study**
15	**How will you identify the participants?**	**I will be requesting female student volunteers aged 11-15 from my school's singing group and will seek permission from their guardians with full disclosure of the research outlines and content.**

16	**Information for participants:**	**YES**	**NO**	**N/A**
17	**Will you describe the main research procedures to participants in advance, so that they are informed about what to expect?**	☒	☐	☐
18	**Will you tell participants that their participation is voluntary?**	☒	☐	☐
19	**Will you obtain written consent for participation?**	☒	☐	☐
20	**Will you explain to participants that refusal to participate in the research will not affect their treatment or education (if relevant)?**	☒	☐	☐
21	**If the research is observational, will you ask participants for their consent to being observed?**	☒	☐	☐

22	**Will you tell participants that they may withdraw from the research at any time and for any reason?**	☒	☐	☐
23	**With questionnaires, will you give participants the option of omitting questions they do not want to answer?**	☒	☐	☐
24	**Will you tell participants that their data will be treated with full confidentiality and that, if published, it will not be identifiable as theirs?**	☒	☐	☐
25	**Will you debrief participants at the end of their participation, in a way appropriate to the type of research undertaken?**	☒	☐	☐
26	**If NO to any of above questions, please give an explanation**			
27	*(this box should expand as you type)*			
28	**Information for participants:**	**YES**	**NO**	**N/A**
29	**Will participants be paid?**	☐	☒	☐
30	**Is specialist electrical or other equipment to be used with participants?**	**X**		☐
31	**Are there any financial or other interests to the investigator or University arising from this study?**	☐	☒	☐
32	**Will the research activity involve deliberately misleading participants in any way, or the partial or full concealment of the specific study aims?**	☐	**X**	☐
33	**If YES to any question, please provide full details**			
34	**Sessions may be filmed for further reflection and critical analysis.** *(this box should expand as you type)*			

SECTION H: Anticipated Risks

1	**Outline any anticipated risks that may adversely affect any of the participants, the researchers and/or the University, and the steps that will be taken to address them.** **If you have completed a full risk assessment (for example as required by a laboratory, or external research collaborator) you may append that to this form.**		
2	**Full risk assessment completed and appended?**	**Yes**	☐
		No	☒
3	**Risks to participants** **For example: emotional distress, financial disclosure, physical harm, transfer of personal data, sensitive organisational information**		
4	**Risk to Participant:** **The topic of adolescence may bring up** **challenging emotions regarding self-identity, body change**	***How will you mitigate the Risk to Participant*** **I will follow the procedures and practices stated in the school child protection handbook which is aligned with Omani Law, United Nations Rights of the Child and International School expectations worldwide. All staff employed at ABA must report suspected incidents of child abuse or neglect whenever the staff member has reasonable cause to believe that a child has suffered, or is at risk of suffering abuse or neglect. Reporting and follow up of all suspected incidents of child abuse or neglect will be in accordance with Omani Law and the child protection procedures resulting from the school policy statement.** **In terms of emotional support, the college counsellor will be able to provide further emotional support as part of the pastoral system.**	
5	**If research activity may include sensitive, embarrassing or upsetting topics (e.g. sexual activity, drug use) or issues likely to disclose information requiring further action (e.g. criminal activity), give details of the procedures to deal with these issues, including any support/advice (e.g. helpline numbers) to be offered to participants. Note that where applicable, consent procedures should make it clear that if something potentially or actually illegal is discovered in the course of a project, it may need to be disclosed to the proper authorities**		

	(this box should expand as you type)				
6	**Risks to investigator** **For example: personal safety, physical harm, emotional distress, risk of accusation of harm/ impropriety, conflict of interest**				
	Risk to Investigator: **I may get emotionally traumatized by participating in the research study, stressed caused by deadlines and juggling work-load. This may be amplified by the time differences here and not being able to access support in a timely manner.** *(this box should expand as you type)*	***How will you mitigate the Risk to Investigator:*** **I will plan and time away from family and work commitments in order to work and rest.** **I will seek alternative therapies - mediation and exercise. I will seek professional help if required.**			
7	**University/institutional risks** **For example: adverse publicity, financial loss, data protection**				
	Risk to University: **Possible engagement with unethical procedures regarding data protection.** **Risk to reputation through poor conduct** *(this box should expand as you type)*	***How will you mitigate the Risk to University:*** **I will follow protocols and procedures and will abide by the ethics laid out in this form.** **This will be mitigated by acting in a professional manner at all times.** *(this box should expand as you type)*			
8	**Disclosure and Barring Service**				
9	**If the research activity involves children or vulnerable adults, a Disclosure and Barring Service (DBS) certificate must be obtained before any contact with such participants.**		**YES**	**NO**	**N/A**
10	**Does your research require you to hold a current DBS Certificate?**		☐		**X**

SECTION I: Feedback, Consent and Confidentiality

1	**Feedback** **What de-briefing and feedback will be provided to participants, how will this be done and when?**
	Email address will be provided should they seek further details or results. *(this box should expand as you type)*
2	**Informed consent** **Describe the arrangements to inform potential participants, before providing consent, of what is involved in participating. Describe the arrangements for participants to provide full consent before data collection begins. If gaining consent in this way is inappropriate, explain how consent will be obtained and recorded in accordance with prevailing data protection legislation.**
	Participants will sign appropriate consent forms for online surveys and questionnaires. *(this box should expand as you type)*
3	**Confidentiality / Anonymity** **Set out how anonymity of participants and confidentiality will be ensured in any outputs. If anonymity is not being offered, explain why this is the case.**
	Participants names and the name of the school will not be used without permission. *(this box should expand as you type)*

SECTION J: Data Protection and Storage

In completing this section refer to the University's Research Data Management Policy and the extensive resources on the University's Research Data Management web pages (http:// uwtsd.ac.uk/library/research-data-management/).

1	**Does the research activity involve personal data (as defined by the General Data Protection Regulation 2016 "GDPR" and the Data Protection Act 2018 "DPA")?**	**YES**	**NO**
	***"Personal data"** means any information relating to an identified or identifiable natural person ('data subject'). An identifiable natural person is one who can be identified, directly or indirectly, in particular by reference to an identifier such as a name, an identification number, location data, an online identifier or to one or more factors specific to the physical, physiological, genetic, mental, economic, cultural or*	**X**	☐

2	***social identity of that natural person.*** **If YES, provide a description of the data and explain why this data needs to be collected:**		
	Video sessions of the participants – for analysis and reflection their progress during sessions **Consent forms of the participants containing their name and signatures.** ***(this box should expand as you type)***		
3	**Does it involve special category data (as defined by the GDPR)?**	**YES**	**NO**

	"Special category data" means sensitive personal data consisting of information as to the data subjects' – (a) racial or ethnic origin, (b) political opinions, (c) religious beliefs or other beliefs of a similar nature, (d) membership of a trade union (within the meaning of the Trade Union and Labour Relations (Consolidation) Act 1992), (e) physical or mental health or condition, (f) sexual life, (g) genetics, (h) biometric data (as used for ID purposes),	**X**	
4	**If YES, provide a description of the special category data and explain why this data needs to be collected:**		
	Research focus will be on adolescent development including physical and mental changes during this period. ***(this box should expand as you type)***		
5	**Will the research activity involve storing personal data and/or special category data on one of the following:**	**YES**	**NO**
6	**Manual files (i.e. in paper form)?**	☐	**X**
7	**University computers?**	☐	**X**
8	**Private company computers?**	☐	**X**
9	**Home or other personal computers?**	**X**	☐

10	**Laptop computers/ CDs/ Portable disk-drives/ memory sticks?**	**X**	☐
11	**“Cloud” storage or websites?**	**X**	☐
12	**Other – specify:**	☐	☐
13	**For all stored data, explain the measures in place to ensure the security of the data collected, data confidentiality, including details of password protection, encryption, anonymisation and pseudonymisation:**		
	All data will be kept in password protected cloud storage on my personal system which will not be shared. Audio/visual data will be transcribed and would be shown to participants to check accuracy of reporting. Any USB sticks used to store or transfer data will be password protected. All participants will be given a unique identifier to ensure confidentiality and this list will be kept securely in the password protected folder. ***(this box should expand as you type)***		
14	**All Data Storage**		
15	**Will the research activity involve any of the following activities:**	**YES**	**NO**
16	**Electronic transfer of data in any form?**	☐	**X**
17	**Sharing of data with others at the University?**	☐	**X**
18	**Sharing of data with other organisations?**	☐	**X**
19	**Export of data outside the European Union or importing of data from outside the UK?**	**X**	☐
20	**Use of personal addresses, postcodes, faxes, emails or telephone numbers?**	**X**	☐
21	**Publication of data that might allow identification of individuals?**	☐	**X**
22	**Use of data management system?**	**X**	☐
23	**Data archiving?**	☐	**X**
24	**If YES to any question, please provide full details, explaining how this will be conducted in accordance with the GDPR and DPA (and/or any international equivalent):**		

	All data will be encrypted and kept in password protected cloud storage on my system which will not be shared. Any USB sticks used to store or transfer data will be password protected. All data transfers will be encrypted and password protected. All participants will be given a unique identifier to ensure confidentiality and this list will be kept securely in the password protected folder. The data will be stored until the completion of the project and then deleted. In accordance with the DPA2018, participants will have the right to ask to see what data is held relating to them, and this data will be deleted immediately if the participant requests this, in which case the data will not be used in the project. *(this box should expand as you type)*		
25	**List all who will have access to the data generated by the research activity:**		
	Myself *(this box should expand as you type)*		
26	**List who will have control of, and act as custodian(s) for, data generated by the research activity:**		
	Myself *(this box should expand as you type)*		
27	**Give details of data storage arrangements, including security measures in place to protect the data, where data will be stored, how long for, and in what form. Will data be archived – if so how and if not why not.**		
	All data will be encrypted and kept in password protected cloud storage on the my system which will not be shared. Any USB sticks used to store or transfer data will be password protected, and will be reformatted at the end of the project in order to destroy the data. The data will be stored until the completion of the project and then deleted. *(this box should expand as you type)*		
28	**Please indicate if your data will be stored in the UWTSD Research Data Repository (see https://researchdata.uwtsd.ac.uk/). If so please explain. (*Most relevant to academic staff)***		
	(this box should expand as you type)		
29	**Confirm that you have read the UWTSD guidance on data management**	**YES**	**X**

		NO	☐
30	Confirm that you are aware that you need to keep all data until after your research has completed or the end of your funding	YES	X
		NO	☐

(see https://www.uwtsd.ac.uk/library/research-data-management/) (see https://www.uwtsd.ac.uk/library/research-data-management/)

SECTION K: Declaration

31	The information which I have provided is correct and complete to the best of my knowledge. I have attempted to identify any risks and issues related to the research activity and acknowledge my obligations and the rights of the participants. In submitting this application I hereby confirm that I undertake to ensure that the above named research activity will meet the University's Research Ethics and Integrity Code of Practice which is published on the website: https://www.uwtsd.ac.uk/research/research-		
	ethics/ Signature of applicant:	Zita Gange	Date: Nov 16th 2021

For STUDENT Submissions:

32	Director of Studies/ Supervisor:	A.Fillery-Travis	Date: 19.1.22
33	Signature:	Annette fillery-travis	

For STAFF Submissions:

34	Academic Director/ Assistant Dean:		Date:
35	Signature:		

Checklist: Please complete the checklist below to ensure that you have completed the form according to the guidelines and attached any required documentation:

☐	I have read the guidance notes supplied before completing the form.
☐	I have completed ALL RELEVANT sections of the form in full.
☐	I confirm that the research activity has received approval in principle

☐	**I have attached a copy of final/interim approval from external organisation (where appropriate)**
☐	**I have attached a full risk assessment (and have NOT completed Section H of this form) (where appropriate)** ***ONLY TICK IF YOU HAVE ATTACHED A FULL RISK ASSESSMENT***
☐	**I understand that it is my responsibility to ensure that the above named research activity will meet the University's Research Ethics and Integrity Code of Practice.**
☐	**I understand that before commencing data collection all documents aimed at respondents (including information sheets, consent forms, questionnaires, interview schedules etc.) must be confirmed by the DoS/Supervisor, module tutor or Academic Director.**
☐	**I have deleted the guidance notes before submitting the PG2 for consideration**
RESEARCH STUDENTS AND STAFF ONLY **All communications relating to this application during its processing must be in writing and emailed to pgresearch@uwtsd.ac.uk , with the title 'Ethical Approval' followed by your name. You will be informed of the outcome of your claim by email; therefore it is important that you check your University and personal email accounts regularly.**	
STUDENTS ON UNDERGRADUATE OR TAUGHT MASTERS PROGRAMMES should submit **this form (and receive the outcome) via systems explained to you by the supervisor/module leader.**	

This form is available electronically from the Academic Office web pages: https://www.uwtsd.ac.uk/academic-office/appendices-and-forms/

Application Process

All staff research projects and all research students must submit the Ethical Approval Form to the University Research Ethics Committee via the Academic Office (pgresearch@uwtsd.ac.uk). Staff research directly in relation to personal study for taught undergraduate or Masters programmes should be submitted via the Institute procedures explained below.

Taught masters and taught undergraduate research Ethical Approval Forms are considered within Institutes. Institutes will provide details of the specific processes for this. Where the Ethical issues within any single ethical application are of particular concern the Institute will refer these to the University Research Ethics Committee. Any student activity that involves the collection of primary data needs to undergo Ethical approval, this includes assignment work as well as dissertations.

Notes for guidance in completion of this form

Section A: About You
Please complete all relevant sections

Section B: Approval for research activity

Research proposals must be approved in principle before applying for Ethical Approval. The proposal approval only becomes final when the ethical approval is received.

The process for proposal approval varies according the individual and programme of study:

- **Research students, by application on form PG1 to the Research Degrees Committee**
- **Taught students by review of research proposal within Institutes (Institutes provide specific details of these processes)**
- **Staff, by agreement by the Academic Director/Assistant Dean**

Section C: External Ethical Guidance materials

Many discipline areas are required to operate with the discipline specific codes of research ethics (for example health, psychology, education etc.), any such codes must be listed and you must tick to confirm that you have consulted with these.

Section D: External Collaborative Research Activity

Provide details of the external collaborative partners, where appropriate you might want to submit a copy of the external collaboration agreement with the Ethical Approval Form. If the partner requires the research to be subject to its own internal Ethical approval process then please provide details of that process and a copy of any final (or interim) approvals received from the organisation.

Section E: Details of Research Activity

Remember that the individuals reviewing this Ethical Approval Form may not have seen your research proposal, and also may not be experts in the specific area of your research. The information provided should therefore be jargon free and clearly stated.

Indicative Title: please use the same title as used on the research proposal.

Purpose: the Ethical approval process will want to ensure that the methods you propose are adequate and appropriate to address the research aims and objectives. Excessive additional data collection can be seen as unethical.

Proposed Methods: the Ethical approval process seeks to ensure that you understand the methods that are intended, and that the implementation of those methods will be appropriate and without unnecessary impact on respondents. This section must explain how the methods described will lead to the collection of necessary and sufficient data, but not excessive data. Please be specific.

Location: this needs to mention geographical location and also local situation (for example, within Local Authority Offices in Cardiff, using a private room but close to other individuals). If

you are collecting data within an organisational setting then you need to explain the permissions that you have obtained to do this.

Research Activity outside of the UK: please complete this section in detail, and note any guidance you have received. Also describe your own familiarity (or not) with the location that you will be utilising.

Section F: Scope of Research Activity

Please tick ALL of the research activities that might be undertaken. If any additional types of activity are intended then please add an extra box and describe these.

If you have answered no to all questions in F then sections G and I do not need to be completed. . Signatures are still required in section K.

Section G: Intended Participants

Please tick all categories that might apply.

Numbers & Source: if you are using a series of different methods or research activities please list numbers for each stage/phase. Be clear about how you will find respondents. Will you use intermediaries, and if so how? How will you ensure compliance with your sampling strategy?

Information for participants: all participants should be appropriately informed about the research, what is expected of them and what will happen to the information that they provide. The Ethical review process does not ask to see this documentation, but requires this to be reviewed and approved by the Director of Studies in the case of research students, the supervisor/module tutor in relation to students on taught programmes and the Academic Director/Assistant Dean in relation to staff research.

Section H: Anticipate Risks

All research carries some level of risk. The answers you provide to questions in this section will be reviewed to ensure that you have an appropriate understanding of the type of risks involved and how you can mitigate against these risks. If you have completed a full risk assessment, as required for example for laboratory work, field work, clinical tests, diving operations, or by a collaborative partner, you may append that to this form. In that case, please tick the box indicating this has been provided. You will not then be required to complete Section H.

Risk to participants Think very carefully about how your actions/questions/discussions might affect the people you are involving as participants. You might identify the risk as small but it would still be a risk. Many types of question have the potential to make respondents less content with their life / job; you need to recognise and try to ameliorate any such effects
If these are business owners, time with you may reduce profit.
In some locations physical risk is very real to both participants and yourself, please consider this.

Risk to you, the researcher Think about where you will meet people, if there are any dangers involved in the location. If you are meeting people as individuals think about using a public place. In general do not visit people in their own homes or remote locations. If you are talking to individuals about certain issues think about how their responses might affect you emotionally. What about the risk of collecting insufficient data?

Risk to the University When undertaking your research, you are acting as a member of the University (student or staff). Professionalism is important, so it is important to be well organised and well prepared. Punctuality, clarity etc. are all part of this. What will you do to ensure this? You must ensure you do not harm the good name of the University in any way and do nothing to undermine the reputation of the research it conducts and sponsors. Upholding high standards of conduct and integrity are vital in this regard. You must also conduct the research in such a way to

minimise the potential for claims of negligence made against the University, its researchers and any collaborating individual or organisation. In this respect you should always comply with ethical, legal and professional frameworks, obligations and standards as required by statutory and regulatory authorities, as well as the university's Research Integrity and Ethics Code of Practice. Research misconduct in this respect can take many forms, including:

- **fabrication: making up results or other outputs (eg, artefacts) and presenting them as if they were real**
- **falsification: manipulating research processes or changing or omitting data without good cause**
- **plagiarism: using other people's material without giving proper credit**
- **failure to meet ethical, legal and professional obligations: for example failure to declare competing interests; misrepresentation of involvement or authorship; misrepresentation of interests; breach of confidentiality; lack of informed consent; misuse of personal data; and abuse of research subjects or material**
- **improper dealing with allegations of misconduct: failing to address possible infringements such as attempts to cover up misconduct and reprisals against whistle-blowers**

Adverse Outcomes. Think carefully about the possibilities, and cover here

Section I: Feedback, Consent and Confidentiality

Feedback to participants: outline your approach. Will interview transcripts be shared with respondents to check accuracy? Will summaries of questionnaire analysis be made available to respondents in some way? Will an overview report be provided? How and when?

Informed consent: Draft letter / e-mail / or heading (or footer) section of questionnaire must be approved by DoS/supervisor (if research student), supervisor/module tutor if taught student, or Academic Director / Assistant Dean if a member of staff.
Confidentiality/Anonymity. Explain clearly how you will ensure confidentiality and anonymity.

Section J: Data Protection and Storage

Before completing this section it is necessary to read the University's Research Data Management information. The questions that follow are designed to ensure compliance with the Data Protection Act as well as established research protocols.

Many research activities will involve electronic transfer of data and use of data management systems in the summarisation and analysis of data. You will need to explain these in relation to compliance with the Data Protection Act.

Think carefully about who will have access to your data, this will include supervisors and examiners. Also that a thesis will be made available via the University library and the British Library system. If you are seeking an access bar for a period of time after completion then mention it here. If you will provide a copy of your findings, or intend to give a presentation, to a facilitating/ supporting/accessing organisation then explain that in this section. But also think about the general principle of data sharing, as explained in the Research Data Management information.

In terms of storage of data please ensure security, and also mitigate against loss of data.

Section K: Declaration

Ensure the appropriate countersignatures have been provided
Look carefully at the checklist and ensure that you comply with and tick all that are relevant to your research.

Appendix 6 - Email from school counsellor

Claire Anthony [redacted] Thu, Nov 18, 2021 at 9:09 AM
To: Zita Gange <

Hi Zita,

Your topic sounds really interesting and thanks for reaching out to check. Yes, the topics you raised around puberty are all included in MS discussions (now we are back on campus).

All students will work through activities this year with the nurse and the science teachers, as well as small group discussions. In the past, this has been timed to happen after Spring Break. Therefore, allowing the natural course of your discussions with the students included in the study is permitted if and when they arise. If, during the meetings, a student is seeking more information that is outside the scope of your study, let me know and I can arrange for me or Suni to follow up.

The very best of luck in your research and writing the paper!

Claire

Claire Anthony
Middle School Counselor
ABA Oman International School
[redacted]

The Middle School Team

ABA OMAN INTERNATIONAL SCHOOL

IB CONTINUUM
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CONTINUO DEL IB

Appendix 7 - Email from school counsellor and Assistant Principal of Middle School

Puberty Talks
3 messages

Zita Gange <zgange[redacted]> Sat, May 28, 2022 at 3:18 PM
To: Tracy Harmelen <[redacted]>
Bcc: Peter Gange <p[redacted]>

Hi Tracy and Claire,

Hot off the press - I have just published my final version of "Your Voice" a vocal wellness magazine to support students during voice change. I know you guys have the puberty talks this Tuesday and I thought it might be a useful addition, completely accessible through the link below. Please note that this forms part of my final Masters research project and has been designed in conjunction with the action research cycle between myself and consenting students.

Your Voice

Thanks! Zita

--

Zita Gange
MYP Music Teacher
Advisor

ABA OMAN INTERNATIONAL SCHOOL

IB CONTINUUM
CONTINUUM DE L'IB
CONTINUO DEL IB

Tracy Harmelen [redacted] Sat, May 28, 2022 at 4:09 PM
To: Zita Gange <[redacted]>

Hey Zita
Whoop whoop, congrats on the Master's work - this is a great addition to the Puberty talks that are happening next week.
Thank you so much for sharing this.

Tracy

Tracy van Harmelen
Middle School
Assistant Principal

ABA OMAN INTERNATIONAL SCHOOL

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Appendix 8 - Atkins and Murphy (1993) cyclical model of reflection

