

## **Musical Development and the Swanwick/Tillman Spiral: A Special Edition**

### **Guest Editorial**

#### **The Swanwick/Tillman spiral of musical development: impacts and influences**

##### **Abstract**

In commemorating the 35<sup>th</sup> anniversary of the publication of the Swanwick/Tillman spiral, this editorial discusses some of the key themes arising from its publication. The article discusses the Swanwick/Tillman spiral's place in music education history, its role in musical development, and its origins. There then follows a brief discussion of each article in this special edition, highlighting some of the significant features tackled by each contributor. The editorial concludes with some reflections on the future of musical development.

**Key words:** musical development, Swanwick/Tillman spiral, composing, BJME

##### **Anthony Anderson**

I awoke in the middle of the night with the idea for this special edition of BJME. As this year marks 35 years since the original spiral of musical development was published by Swanwick and Tillman (1986), it seemed to me an exciting thought to mark the moment with an issue which recognised this landmark paper. The excitement continued when the editors of BJME accepted my proposal as a worthwhile endeavour, and it has been an exciting and challenging project ever since. I was especially delighted at the opportunity to work with June Boyce-Tillman to develop an article based on an interview with her exploring thoughts behind her contribution to the spiral, which was the culmination of her original doctoral thesis; and at the positive response from Keith Swanwick who agreed to contribute an article to this edition with equal enthusiasm and whose new paper brings to light dimensions of the spiral's development which are not widely known.

Significant junctions exist at key moments in music education history. All too easily, a page can be turned and knowledge and the opportunity for discussion and debate lost, sometimes forever. I am therefore delighted to be able to present the articles in this issue with the hope

that the writings here will help, in some measure, to assuage such moments. I believe this project is significant and important and that it brings new knowledge and perspectives to the field that will enrich musical learning and its discussion for future generations, both in the lives of young people, teachers, teacher educators, researchers and policymakers.

This special edition of BJME aims to do more than mark a research milestone, however. The Swanwick/Tillman spiral is important, because this work has influenced countless music educators in their thinking about developmental music matters. Spirals of development continue to be a formulation that feature prominently in the thinking of music teachers (Anderson, 2019). This has arguably become even more dominant as teachers have thought about curriculum design in order to engage with Ofsted's (the schools' inspectorate in England) definition of curriculum. Ofsted consider curriculum as intent, implementation and impact (Phillips, 2017) and it is often as curriculum intent that teachers have encountered spiral formulations of curricula. It is also significant that despite the spiral featuring prominently in teacher thinking, it remains largely absent in policy documentation. Indeed, the recent Ofsted research review for music (Ofsted, 2021) mentions musical development on only one occasion, in the context of balancing formal and informal musical learning. There is therefore a mismatch between teacher practices and official formulations, although the discussion of this conflict is nothing new (Cox, 2002). It is my aspiration that this edition will begin to bring some of the disparate debates together, as it draws on a wide range of perspectives and writer biographies.

As well as marking the achievement of the Swanwick/Tillman spiral, this special edition will also endeavour to give voice to a critique of the spiral, in an effort to contribute to balanced academic discourse. Critique of the spiral is hard to find in music education research literature and where it does exist, it tends to be part of debate some decades ago (Mills, 1992; Lamont, 1995). There has been little contemporary discussion of the validity of Swanwick and Tillman's levels of transformation and whether they are reliable today. There

have been some suggestions that developments in music technology may require the spiral to be revised (Cain, 2004), but again, this is some time ago. This issue therefore has a significant contribution to make in debating omissions, or areas which require further development in a spiral formulation of musical learning. Ultimately our understanding of what musical development means requires such critique to open new fields of research and to highlight areas in which musicians of all ages have an entitlement to musical opportunities and experiences.

### **Why use a spiral to understand musical development?**

Swanwick and Tillman's 1986 paper does not begin with a spiral, but with a theoretical basis and an exploration of children's composition. It is only after a detailed analysis of these compositions that the spiral is presented. As well as appearing in this journal in 1986, the spiral additionally appears in June Boyce-Tillman's doctoral thesis (Tillman, 1987), where it also emerged as a representation of findings from her longitudinal study on composing with 3 – 11 year olds, analysing 745 compositions from 48 children over four years. The spiral which followed the discussions both from thesis and published paper, consists of four turns, with the level of transformation labelled from bottom to top as: materials, expression, form and value. Each level consists of two twists, and within these are listed sequential developmental modes: sensory, manipulative, personal, vernacular, speculative, idiomatic, symbolic and systematic. Along the outer edges of the spiral there are development stages with age ranges, which draw from Piaget: mastery (0-4), imitation (4-9), imaginative play (10-15) and meta-cognition (15+). The beginning and ending of the spiral appear as a torn edge, (indicating their presence as a continuum?) and an arrow underneath the spiral points to the right and is labelled "towards social sharing". This spiral forms the core of our discussions in this issue and is reproduced again in the first paper of the collection.

The extent to which music does, or does not, possess aesthetic characteristics, has facilitated a discourse of values in music education and why these might be considered

important (Elliott, 1995; Swanwick, 1999). The notion that the nature of music can be understood in a multi-dimensional fashion may be one contributory factor explaining why music educators and researchers often represent musical development as a three dimensional entity. Although Bruner (1960) suggested that a spiral was an appropriate way to understand learning development in general terms, the spiral also has a significant history in music education. The Manhattanville spiral (Thomas, 1970) embodies musical characteristics in quite defined terms, in which cycles develop in musical complexity (dynamics move from contrasts of 'forte' and 'piano' in cycle 1, to 'shaping' in cycle 4, for example). Swanwick and Tillman's (1986) spiral concentrates on ideas of materials, expression, form and value, but both authors were to take the spiral in different directions in their later work. Swanwick explored a spectrum between accommodation and analysis, and intuition and assimilation, with these lying along the outer edges of the spiral (Swanwick, 1994). Boyce-Tillman, on the other hand, considered interlocking circles as though viewed from above and encompassing spiritual elements (Boyce-Tillman, 2006). Spirals have also appeared in a musical context in the work of Daubney and Fautley (2015; 2019) and in the outputs of commercial providers of music education (Charanga, 2015).

### **Does musical development need a model?**

Before considering the articles which form this edition, it may be helpful to think about why musical development might require a model in the first place. Characteristics of musical development have sometimes been discussed in musical behaviour terms. Regelski (1975) considered cognitive and psychomotor behaviours as one means for understanding musical perceptions and therefore their developments. In a similar vein, Hargreaves (1986) later commented on verbal, making, and performing behaviours, as a conduit to understand development in music. A differing approach was adopted by Paynter, who regarded composition as central to musical development, which he considered to be fundamentally intuitive. For Paynter, musical development emerged from existing musicality in children, which benefitted from nurturing, and from which differing types of musical education could be identified (Paynter, 1970; 1977). It was in the context of this discourse of differing

perspectives of musical development that Swanwick began to conceive models of musical meaning, (Swanwick, 1979) and to consider what Piaget's (1926) stages of development might mean in musical terms. This led to his writings on the development of musical knowledge (Swanwick, 1983), which were later to prove so formative in the development of the spiral. It was at around this time that Swanwick began to work with June Tillman as PhD supervisor, an academic collaboration which later led to the publication of the spiral of musical development (Swanwick & Tillman, 1986). Tillman's inspiration for her conceptualisation of musical development emerged from models proposed by Ribot (1906), Taylor (1959), Tait (1971), Cottle (1973), Glynne-Jones (1973), Piaget (1974), and Ingely & Hunter (1975), which she conceptualised as stages which first appeared in her thesis and was later published with Swanwick. The ground work for development literature was thereby collected, interpreted and reimagined for music education. It is perhaps partially this considerable literature collation, contextualising, and conceptualising in the first of Tillman's (1987) two part thesis that is the unrecognised contribution of June Boyce-Tillman's to musical development. The Swanwick/Tillman spiral was not a model of convenience, but drew together multi-dimensional historical discourse and located this through an interpretivist lens of doctoral research findings. It facilitated a discussion on musical development which may not otherwise have taken place, enriched music education for thousands of young people and addressed a research gap of empirical praxis.

The Swanwick Tillman (1986) spiral as a model of musical development therefore became one of the most widely known and internationally referenced models in the field of music education. Numbers of citations range from 130 (Swanwick & Tillman, 1986b) to 689 (Google Scholar, 2021), beginning in 1988 and continuing to the present day, leaving little room for doubt of the spiral's significance in the discourse of music education and beyond. By the time this editorial is print, the citations will inevitably be even more numerous. Studies which cite the original paper that contained the spiral include areas as diverse as:

composition (Kratz, 1989), creativity and special educational needs (Collins, 1992), childhood (Young, 1995), culture and instrumental learning (Cope & Smith, 1997), improvisation (Burnard, 2000), composing with music technology (Reynolds, 2005), thinking skills (Craft *et al.*, 2007), action research (Cain, 2008), lifelong learning (Lamont, 2011), jazz improvisation (Palmer, 2016), language origins (Nkolsky, 2020), curriculum design (Anderson, 2021), and community music (Smith, 2021), to highlight only a small selection. Such a wide contextual discussion over the past 35 years is what merits the papers I am pleased to include in this issue and to which I now turn.

### **About this special edition**

This special edition of the journal begins with a reproduction of the original Swanwick and Tillman article, the centrepiece for the contributions of this issue. This is followed by Keith Swanwick's reflections on the sequence of musical development. He outlines the importance of the spiral as he sees it in musical contexts and charts its origins, influences and development. In his first published comments on the spiral for some years, it is particularly interesting to note his observations that the open ends of the spiral indicate new musical contexts, and his assertion that the spiral does not represent static stages of development, but rather states that are cumulative and interlinked. Swanwick's commentary on how he was to develop the spiral in his 1994 work *Musical Knowledge: intuition, analysis and music education* also adds considerably to known discourse of the spiral, as in his article Swanwick describes how he came to understand the two sides as well as vertical relationships in the spiral formation. He goes on to develop the spiral as an assessment tool and describes its use in a Brazilian context. Swanwick's musical universe and the place of the spiral in musical understanding is brought to the fore in his commentary, which enables greater understanding of some of the original thinking that lay behind the spiral and how musical discussion and debate has been influenced by it in the subsequent three decades.

June Boyce-Tillman's doctoral research contributed the data and established philosophical underpinning for the development of the spiral of musical development. In this special

edition, she discusses some of her thoughts and perspectives on this process and how her thinking has continued to develop, presented as an interview I was able to conduct with her in 2017. This article considers the origins of the vernacular, the meanings of musical literacy, how curriculum design and sequencing fits into the model and Boyce-Tillman's response to some of the critiques which have been made of the spiral. This article includes commentary on Boyce-Tillman's research, alongside examples of musical development and an explanation of her understanding of values. The article also explores how the model of the spiral originated and was conceptualised, as well as how it was developed. This article is a new contribution to the field which explores many of the to-date unknown influences and modifications which were brought to bear on the spiral as it found its final form. Boyce-Tillman discusses the challenges of conceptualising the spiral and defending it in her viva. The critical commentary which accompanies the interview provides further perspectives on the elements and modes of the spiral, placing these into a historical and more contemporary context.

This edition has enabled further contemporaneous and generally unknown studies to emerge. This includes the duoethnographic article by Finney and McCullough which describes their experiences of study on the MA music education course at the University of Reading, in England. This work has significant overlap with the spiral, as June Tillman was involved as one of the assessors of children's compositions within McCullough's research which sought to replicate Tillman's study. However, the article in this edition goes further, as it discusses the validity of the modes of the original Swanwick/Tillman spiral (or helix as the authors suggest it might be more accurately referred to) and presents a critique of the use of Piaget and the spiral formulation of the 1986 paper. Its conclusion that "models are only models" results in a new purpose zig-zag proposal for musical development as well as seeking to chart potential future directions in the field of musical development.

Also in this issue, Chris Philpott focuses on Swanwick's meta-theory of music, working out from the spiral and looking at the wider context of Swanwick's work. Philpott considers the critical nature of musical knowledge and metaphor, and examines the claims of the original 1986 article, before tracing the implications of Swanwick's approach for musical learning, development, teaching, assessment and evaluation. As part of his discussions, Philpott also presents a commentary on the critical issues arising from the spiral and Swanwick's role within this, identifying potential issues with musical meaning, claims for universality and musical criticism without criticality. He brings his discussions to a close by placing the spiral into a contemporary context and asking what Swanwick's approach means for music education today.

Graham Welch brings an important contemporaneous perspective to our spiral considerations. Unbeknown to him, he was engaged in his PhD fieldwork at the same time as June Tillman, collecting data only a couple of miles away from where she was working. Welch's work was also published in the same edition of BJME as the Swanwick/Tillman spiral. He offers fresh insights into influences on the spiral, rarely discussed studies and comparisons, and places this alongside a critical commentary about what musical development means as it relates to musical behaviours. He draws on research in the domain of singing to do this and discusses the validity of a linear conceptualisation of musical development, before considering what musical development might mean subsequent to Swanwick and Tillman's work in the 1980s.

An international perspective on the spiral is given voice through Vicki Thorpe, & Graham McPhail's article with Stuart Wise, which traces a history of music education in New Zealand. The spiral discussions contained in this article arise as reflections on Swanwick's visit to the New Zealand Society of Music Education in 1989. From this, Swanwick's influence on teaching is explored as recounted through reflections from primary music educators. The article also examines influences of more recent times and discusses diversions from the

English model of music education, exploring impacts and implications. Thorpe and McPhail's discussions provide an important insight into cultural understandings of the spiral and its role in transition from subjective personal responses, to social responses that acknowledge the influence of external musical conventions.

The voice of the classroom music teacher is also a strong feature in our collection of articles. Maureen Hanke brings contemporaneous teacher discussion of the spiral as she relates her classroom work in 1986, when Swanwick and Tillman's article was first published. She discusses using the spiral in young people's composing as a model for pedagogical practices and considers the place of the spiral in dynamic composing feedback from teacher to pupil, before also considering the spiral's influence in primary school education settings. The legacy of the spiral is evident from contributions from current music teachers too. Nikki Booth discusses what the spiral means for assessment in formative and summative contexts in music education. He considers the speculative and idiomatic in composition before presenting two case-study examples considering threshold concepts and the use of audio recorders to capture and enable 'work-in-progress' composing. James Leveridge, also a current classroom music teacher, outlines the constraints music teachers now face in the classroom and traces the origins of spirals in educational use. His article considers learning as individuals and the role of the teacher in musical development from the perspective of musical knowledge, as he relates the spiral to current music teaching practices.

The special edition concludes with Martin Fautley and Alison Daubney's discussion of spiral thinking, planning and impact. Highlighting the connection between progression and development, they suggest the spiral represents a progression model, before tracing its development through Bruner's work and the Manhattanville spiral and dealing with challenges of non-linear progression along the way. The article notes that the spiral is not intended to offer a curriculum solution, but to chart development of composing materials, and draws attention to the number of iterations that there have been of the spiral – an unusual

characteristic in music education research. Fautley and Daubney conclude by placing the spiral into a current policy context through a detailed discussion of the Model Music Curriculum, and suggest that music education is as much about preparing children for future musical activity as it is about the reproduction of music of the past.

### **The future of musical development**

The Swanwick/Tillman spiral has already been developed into different formulations by the original authors themselves (Swanwick, 1994; Swanwick, 1999; Boyce-Tillman, 2006).

Spiral formations have also been reimagined and reinterpreted in musical development contexts (Daubney & Fautley, 2015; Daubney & Fautley 2019; Charanga, 2015) and it seems likely that this will continue. It is therefore apposite to consider what might be next for spiral influenced interpretations of musical development and how the spiral might be further refined. It may be that the spiral could be extended, as tantalisingly indicated with its torn edges where it begins and ends in its original formulation. Perhaps the orientation of the spiral is yet to be explored, where development is represented as occurring from vertical to lateral movement or combines both these planes. This may be what Swanwick and Tillman themselves had in mind with their horizontal arrow indicating the possibilities of social sharing arising from the spiral. Understanding musical development in terms of movement within spiral boundaries and how such pathways may be formulated, rather than as a static model may be another notion which has potential for development in the years ahead.

Scholarship will no doubt uncover new ways of thinking about spirals from research data and interpretations of their validity in wider cultural contexts than was at first conceived.

Whatever the future may hold, it seems likely that we have not heard the last of spirals of musical development. Now is the moment to review and reflect on how spirals have influenced thinking in music education and impacted on the musical experiences of young people. My aspiration is for this issue to make a thoughtful and important contribution to the field. I hope you will agree that the authors in this edition have achieved this aim.

## Acknowledgements

I am deeply indebted to all the authors who have given their time so generously to write the detailed articles contained in this special edition. I wish to thank them for their dedication to this task and for their kind responses to my many queries. I wish to give special thanks to Keith Swanwick and June Boyce-Tillman for their help and generosity in revisiting their earlier work and providing fresh insights. I also wish to acknowledge my deep gratitude to Martin Fautley and Alison Daubney for their belief in this project and tireless support and encouragement. My thanks also go to Cormac Lambe for his skill and expertise in assisting me to navigate the world of journal administration.

## References

- Anderson, A. (2019). *Happy accidents?* Music teacher perceptions of curriculum design at Key Stage 3 in the English secondary school Birmingham City University, unpublished thesis
- Anderson, A. (2021). Understanding curriculum design in the perceptions and practices of classroom music teachers in the lower secondary school in England. *British Journal of Music Education*, 1-12. <https://doi.org/10.1017/S0265051721000152>
- Boyce-Tillman, J. (2006). Music as Spiritual Experience. *Modern Believing: Church and Society*, 47, (3), July pp. 20 – 31.
- Burnard, P. (2000). How Children Ascribe Meaning to Improvisation and Composition: Rethinking pedagogy in music education. *Music Education Research*, Vol. 2, Issue. 1, p. 7
- Bruner, J. S. (1960). *The Process of Education*. Cambridge MA: Harvard University Press.
- Cain, T. (2004). Theory, technology and the music curriculum. *British Journal of Music Education*, 21(2), 215–221. Cambridge University Press.
- Cain, T. (2008). The characteristics of action research in music education. *British Journal of Music Education*, Vol. 25, Issue. 3, p. 283
- Charanga Musical School (2015). Accessed from: <https://charanga.com/site/> Retrieved on 15<sup>th</sup> September 2017.
- Collins, D. (1992). Creativity and Special Needs: A Suggested Framework for Technology Applications. *British Journal of Music Education*, Vol. 9, Issue. 2, p. 103
- Cottle, T. J. (1973). A Simple Change in Creativity. *Journal of Creative Behaviour* 7(3), 161 – 164.
- Cope, P., Smith, H. (1997). Cultural context in musical instrument learning. *British Journal of Music Education*, Vol. 14, Issue. 3, p. 283
- Cox, G. (2002). *Living Music in Schools 1923-1999*. Farnham: Ashgate.

Craft, A., Cremin, T., Burnard, P., Chappell, K. (2007). Teacher stance in creative learning: A study of progression. *Thinking Skills and Creativity*, Vol. 2, Issue. 2, p. 136

Elliott, D. (1995). *Music Matters: A New Philosophy of Music Education*. Oxford: Oxford University Press.

Fautley, M. and Daubney, A. (2015). *The National Curriculum for Music: A Framework for Curriculum, Pedagogy and Assessment in Key Stage 3 Music*. London: Incorporated Society of Musicians.

Fautley, M. and Daubney, A. (2019). *The National Curriculum for Music: A Revised Framework for Curriculum, Pedagogy and Assessment in Key Stage 3 Music*. London: Incorporated Society of Musicians.

Glynne-Jones, M. (1973). Learning about Music. *Froebel Journal*. No. 26, pp. 12 – 14.

Google Scholar (2021). Available at:

[https://www.google.co.uk/search?q=The+Sequence+of+Musical+Development%3A+A+Study+of+Children%27s+Composition+Crossref&sxsrf=AOaemvKPBjqccz1aqxsmx7QBskf4lu1Hvw%3A1634212235785&source=hp&ei=ixloYcKDLMCExc8P0rmxwA4&iflsig=ALs-wAMAAAAAYWqnm9RdhZblfOsoZlfVxOb6A0PN7Ep\\_&ved=0ahUKEwiC9bD-6snzAhVAQvEDHdJcDOqQ4dUDCAk&uact=5&oq=The+Sequence+of+Musical+Development%3A+A+Study+of+Children%27s+Composition+Crossref&gs\\_lcp=Cgdnd3Mtd2l6EAM6BqgAEBYQHIDACVjWKGCVK2gAcAB4AIABdYqB3AWSAQM5LjGYAQCgAQKqAQE&scient=gws-wiz](https://www.google.co.uk/search?q=The+Sequence+of+Musical+Development%3A+A+Study+of+Children%27s+Composition+Crossref&sxsrf=AOaemvKPBjqccz1aqxsmx7QBskf4lu1Hvw%3A1634212235785&source=hp&ei=ixloYcKDLMCExc8P0rmxwA4&iflsig=ALs-wAMAAAAAYWqnm9RdhZblfOsoZlfVxOb6A0PN7Ep_&ved=0ahUKEwiC9bD-6snzAhVAQvEDHdJcDOqQ4dUDCAk&uact=5&oq=The+Sequence+of+Musical+Development%3A+A+Study+of+Children%27s+Composition+Crossref&gs_lcp=Cgdnd3Mtd2l6EAM6BqgAEBYQHIDACVjWKGCVK2gAcAB4AIABdYqB3AWSAQM5LjGYAQCgAQKqAQE&scient=gws-wiz) (Accessed on: 9<sup>th</sup> November 2021)

Hargreaves, D. J. (1986). *The Developmental Psychology of Music*. Cambridge: Cambridge University Press.

Ingley, W. S. & Hunter, H. (1975). Music for Today's Children. *Music Teacher*. Vol. 54(3), 15 – 16.

Kratus, J. (1989). A Time Analysis of the Compositional Processes Used by Children Ages 7 to 11. *Journal of Research in Music Education*, Vol. 37, Issue. 1, p. 5

Lamont, A. (1995). Review of Swanwick, K. Musical Knowledge: Intuition, Analysis and Music Education. *European Society for the Cognitive Sciences of Music*. Newsletter No. 7, April 1995. ISSN 1022-9299.

Lamont, A. (2011). The beat goes on: music education, identity and lifelong learning. *Music Education Research*, Vol. 13, Issue. 4, p. 369

Mills, J. (1992). Musical development in the primary years. *Music in the Primary Years*. Cambridge: Cambridge University Press.

Nikolsky, A. (2020). The Pastoral Origin of Semiotically Functional Tonal Organization of Music. *Frontiers in Psychology*, Vol. 11

Office for Standards in Education (2021). *Research Review Series: Music*. London: Crown Copyright.

Palmer, C. M. (2016). Instrumental Jazz Improvisation Development. *Journal of Research in Music Education*, Vol. 64, Issue. 3, p. 360

Paynter, J. (1970). *Sound and Silence: Classroom projects in creative music*. Cambridge: Cambridge University Press.

- Paynter, J. (1977). The Role of Creativity in the School Music Curriculum. *Music Education Review: A Handbook for Music Teachers*, Vol.1, pp. 3 – 7. London: Chappell.
- Phillips, M. (2017, July, 03). *Curriculum Matters Keynote*. [Paper presentation]. Westminster Education Forum: The future for music education in England – maintaining standards, music hubs and career pathways, London: England.
- Piaget, J. (1926). *The Language and Thought of the Child*. Chippenham: Anthony Rowe.
- Piaget, J. (1974). *The Child and Reality (Problems of Genetic Psychology)*. London Frederick Miller.
- Regelski, T. (1975). *Principles and Problems in Music Education*. New Jersey: Prentice-Hall.
- Reynolds, N. (2005). The Computer as Scaffold, Tool and Data Collector: Children Composing with Computers. *Education and Information Technologies*, Vol. 10, Issue. 3, p. 239
- Ribot, T. (1906). *Essay on the Creative Imagination*. Open Court Publishing Company.
- Smith, R. (2021). What can the Welsh school music sector learn from the community music movement? *Journal of Popular Music Education*, Vol. 5, Issue. 1, p. 55
- Swanwick, K. (1979). *A basis for music education*. Windsor: NFER.
- Swanwick, K. (1983). *The Arts in Education: Dreaming or wide awake?* London: University of London Institute of Education.
- Swanwick, K. (1994). *Musical Knowledge: intuition, analysis and music education*. London: Routledge.
- Swanwick, K. (1999). *Teaching Music Musically*. London: Routledge.
- Swanwick, K. & Tillman. J. (1986). The sequence of musical development: a study of children's compositions. *British Journal of Music Education* 3(3), 305-339. Cambridge University Press.
- Swanwick, K. & Tillman. J. (1986b). The sequence of musical development: a study of children's compositions. [online] Available at: <https://www.cambridge.org/core/journals/british-journal-of-music-education/article/sequence-of-musical-development-a-study-of-childrens-composition/F59212F54A1909DB5DCD3FE0EF3F64D6> (Accessed 14th October 2021)
- Tait, M. (1971). Whispers, Growls, Screams and Puffs – lead to Composition. *Music Educators Journal*. Vol. 57(6), pp. 33 – 34.
- Taylor, I. A. (1959). The Nature of the Creative Process. IN *Creativity: An Examination of the Creative Process*. (Ed) Smith, P. New York: Hastings House
- Thomas, R. B. (1970). *Final Report. Manhattanville Music Project Program*. New York: US Department of Health, Education and Welfare.
- Tillman, J. (1987). *Towards a Model of the Development of Musical Creativity: A Study of the Compositions of Children Aged 3 – 11*. Thesis, University of London Institute of Education.

Young, S. (1995). Listening to the music of early childhood. *British Journal of Music Education*, Vol. 12, Issue. 1, p. 51