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Putting the A in STEAM: Arts Education in Junior Cycle

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Introduction

This chapter should be considered in light of recent movements towards a philosophy of education, which values the integrated teaching of skills and content particularly within a real life context (Department of Education and Skills [DES] 2017c). Whilst this movement was initially predicated on the fusion of Science, Technology, Engineering and Mathematics (STEM) more recent developments have considered the addition of arts based subjects, including music, thereby providing the enhanced acronym STEAM. Research from the Economic and Social Research Institute (ESRI) and the Arts Council confirms that arts and cultural participation leads to a range of positive outcomes for children, both in terms of their cognitive development and their well-being (Smyth 2016). Arts education forms a compulsory part of primary level

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education in Ireland and is thought to be ‘integral ... in helping to promote thinking, imagination and sensitivity, and arts activities can be a focus for social and cultural development and enjoyment in school’ (DES 1999, p. 2). While the primary level arts curricula are detailed and systematic, the implementation of these curricula, particularly that of the music curriculum, presents challenges. The many challenges reported by primary teachers in relation to teaching music impacts on the quality and quantity of music education received by students and in turn impacts on the uptake of music at junior cycle level (McCarthy 1999).

The current Junior Certificate Music Syllabus (JCMS) is increasingly viewed as outdated and narrow (National Council for Curriculum and Assessment [NCCA] 2015). As part of the wider reform of junior cycle a revised programme has been designed to appeal to a broader cohort of students, with creativity and personal development at the core (NCCA 2017b), reflecting the emphasis on key skills development outlined in Chap. 5 of this volume. After an initial examination of the concept of STEAM education, this chapter will focus on music as part of the reform of junior cycle. This analysis (1) investigates the rationale for reform at junior cycle, (2) explores music curriculum development in Ireland outlining the main changes in content, pedagogy and assessment, (3) identifies if the new Junior Cycle Music Programme (JCMP) is in keeping with international best practice and current developments in music education and (4) considers potential outcomes of the reform.

STEAM Education

STEM is seen as ‘a central preoccupation for policymakers across the world’ (Clarke 2019, p. 225). In this context, Irish policymakers have promoted STEM to enrich the skill set of the workforce (DES 2016) and launched the STEM Education Policy Statement (EPS) 2017–2026 (DES 2017c) and Implementation Plan (IP) 2017–2019 (DES 2017b). Although there has been a major focus on STEM education in recent years, Clarke (2019, p. 227) observed that a ‘shift in emphasis to

innovation and creativity on the part of policymakers has led to a renewed focus on the arts and humanities'. This shift was inspired by the desire to produce graduates who are creative, innovative, curious and self-motivated (Land 2013). During the consultation process for the development of the STEM EPS and IP, it was suggested that the acronym 'STE(A)M' be considered 'as the Arts and creativity are very much integral to the notion of STEM education' (DES 2017a, p. 11). While this suggestion was not applied, the EPS and IP reports do, however, include partnerships with the arts within their objectives and indicators of success. The STEM Education in the Irish School System Report (DES 2016, p. 48) also acknowledges the benefits of the inclusion of the arts and recommends 'that any future strategy for STEM in Ireland takes account of the STE(A)M hybrid'.

The concept of creativity is one of the principles and key skills at the core of recent reform at junior cycle level in Ireland (DES 2015). With the arts lending themselves very naturally to the concept of creativity, educational reform in Ireland acknowledges the significance of fostering and encouraging this through the arts (Department of Arts, Heritage and the Gaeltacht DAHG/DES 2012; NCCA 2017b). In September 2018, a reconceptualised post-primary music programme was introduced based on the principle that 'learning about and through the arts is fundamental to an education that aspires to nurture and support the development of the whole person' (NCCA 2017b, p. 4). With creativity and personal development at its core, this new programme was designed to appeal to a wide cohort of students and teachers. It encourages students to make and create music in a variety of ways and grants significant freedom of choice. While previous second-level music curricula tended to be largely subject-centred (as discussed later), the JCMP is more akin to the primary school music curriculum and is aligned with its aim of placing the student 'at the centre of the educational experience' (NCCA 2017b, p. 3). The difference in focus between the student-centred approach of the primary school curriculum and the subject-centric approach of previous second-level music curricula is one of the factors that contributed to a 'fractured continuum in school music education in Ireland' (Heneghan 2001, p. 49).

The Rationale for Reform of Music Education in Ireland

In 1985, the *Deaf Ears?* report (Herron 1985) observed a poor state of music education in Ireland pointing to a lack of accessibility and inclusivity. Concerns relating to the state of music education continued to be expressed in the years following this damning report. During the forum for the Music Education National Debate (MEND 1995–1996) Frank Heneghan remarked that ‘a continuum in music education between primary and secondary education is virtually impossible under current circumstances’ (MEND 1996, p. 16). Though Heneghan (2001) believed that the curriculum revisions of the 1990s addressed the fracture, this has not proved to be the case. Although music is a compulsory element of the primary school programme the quantity and quality of music education at primary level (which in most cases is delivered by a generalist teacher) is questionable, and huge inconsistencies continue to exist (Kerin 2019; Smyth 2016). This is due to a number of factors, including teachers’ self-perceived confidence deficits in music (Hennessy 2000; Russell-Bowie 2009; Wiggins and Wiggins 2008) and diminished access to music pedagogy during pre-service teacher education (Mills 1989).

The varying levels of music education encountered by students during their primary school years strongly determines the profile of the post-primary school music student and the first year music class is often characterised by extreme levels of disparity rarely reported in other subjects. This presents a challenge to teachers in ensuring that all students, regardless of prior experience and current levels of expertise, are facilitated. The varying levels also impact the number of students choosing to study music at second-level (Smyth 2016). Music is sometimes perceived as a subject solely for the ‘talented’, rather than one that can be accessed by all (Regelski 2009). Furthermore, while most adolescents enjoy musical activities, this is often considered ‘separate’ or ‘different’ to formal music education. As Heneghan (2001, p. 27) points out ‘the

problem in general education is to establish a convincing relationship between school music and the perception of the learners as to how music matters to them in real life'. The JCMS, which has been criticised for being 'old fashioned and lacking in relevance' (NCCA 2015, p. 21), perhaps reinforces a sense of distance between how students engage with music on a daily basis and how music is presented within the classroom. The relevance and appeal of a music programme to students is not only connected with previous music experience and self-perceived ability, but also to the type of music that is offered. Research suggests that the JCMS fails to stimulate or engage the student (Smyth et al. 2006). Although it includes a wide variety of musical genres, the relatively fixed nature of the syllabus means that much of the content, even the so-called popular songs, is alien to the average twenty-first-century student (NCCA 2015).

Music at Junior Cycle: Changes in Curriculum

The JCMS was introduced in 1989 and was intended to be more appealing, approachable and accessible than its predecessor, with a musical rather than academic focus (NCCA 1989a, 1989b). The previous 'music and musicianship' programme (1972) was divided into two different syllabi, one of which had a practical performance element (NCCA 2015). The 1989 syllabus saw the introduction of two different levels of study (higher and ordinary) and is divided into three core areas: listening, composing and performing. The presentation of the 1989 syllabus is strongly exam orientated, with little encouragement to explore beyond the syllabus itself. The JCMP, introduced to schools in 2018 (NCCA 2017b), represents a change from previous music curricula. Perhaps the most obvious shift is that from subject focused to student focused, with a great deal of exploration and discovery being required of the student. Table 8.1 highlights the main features of the 1989 and 2018 curricula.

Table 8.1 Main features of recent music curricula at junior cycle

1989 JCMS ^a	2018 JCMP ^b
Three main parts:	Three interwoven strands incorporating creating and exploring; appraising and responding; participating and music-making:
<ul style="list-style-type: none"> • Listening <ul style="list-style-type: none"> – Set songs + works – Choice songs + works – Irish music – General listening skills – Dictation – General study • Composing <ul style="list-style-type: none"> – Triads – Harmony – Or free composition • Performing 	<ul style="list-style-type: none"> • Procedural knowledge <ul style="list-style-type: none"> – Imagination – Creativity – Music literacy – Music skills • Innovation and ideation <ul style="list-style-type: none"> – Composing – Arranging – Performing – Technology • Culture and context <ul style="list-style-type: none"> – Music from various eras – Music from various cultures – Music from different genres
Offered at two levels: higher and ordinary	Offered at one level: common
Subject-centred	Student-centred
Exam-focused	Learning outcome based
Prescribed learning (for the most part)	Greater freedom for teachers and students in choosing content

^aJunior Certificate Music Syllabus

^bJunior Cycle Music Programme

The new programme (offered at common level only) emphasises three interconnected strands: procedural knowledge; innovation and ideation; and culture and context. It involves a number of statements of learning and key skills, which are linked to musical activities. Like the 1989 syllabus, students will continue to engage in performing, listening and composing activities, but these activities are accorded more liberty and expression. During curriculum development, many stakeholders engaged with the junior cycle music consultation process (NCCA 2017a). Respondents, including the Post Primary Music Teachers Association, the Arts Council of Ireland and the Society for Music Education in Ireland, raised a number of issues, including the level of freedom associated with the course content, though such freedom reflects international practice, for example, in Estonia and Finland (Sepp et al. 2012). The new

curriculum specification suggests a number of learning outcomes relating to three areas: creating and exploring; appraising and responding; and participating and music-making. These areas are not dissimilar to the three core components emphasised in Hungarian music education: create, appreciate and recognise (Music Education Network, online). Music-making is a practice that is central to the Finnish (Sepp et al. 2012) and Swedish systems (Georgii-Hemming and Westvall 2010) of music education and is also advocated by Musical Futures—an approach to music learning that aims to be relevant, inclusive and sociable, and is motivated by the musical culture of students (D’Amore 2014; Musical Futures n.d. online).

Music at Junior Cycle: Changes to Assessment

Educational assessment receives much attention and debate, including assessment in music education (Fautley 2010). Curriculum reform has resulted in some corresponding changes in assessment procedures, and key elements of these are presented in Table 8.2.

Table 8.2 Main features of assessment in music: 1989 and 2018 music curricula

1989 JCMS	2018 JCMP
Exam-focused	Learning outcome based
Summative assessment	Formative + summative assessment
<ul style="list-style-type: none"> • Practical performance exam (25%) <ul style="list-style-type: none"> – Two (ordinary level)/four (higher level) songs/pieces – Maximum of two different performing activities – Unprepared test: aural memory test/sight test • Written exam (75%) <ul style="list-style-type: none"> – Listening – Composing 	<ul style="list-style-type: none"> • Practical performance exam (30%) <ul style="list-style-type: none"> – Three songs/pieces – Various combinations of performing activities possible – Unprepared test: aural memory test/sight test/improvisation • Written exam (70%) <ul style="list-style-type: none"> – Based on a selection of learning outcomes • Two classroom-based assessments (descriptive comments) <ul style="list-style-type: none"> – Composition portfolio – Programme note
SEC assessed	SEC and teacher assessed

Assessment of the 1989 JCMS consists of a performance exam and a written exam, both of which are marked externally by the State Examination Commission (SEC). There has been much criticism in relation to the written assessment of the JCMS, with only a fraction of what is studied appearing on the exam (NCCA 2015). Furthermore, the chosen song or work functions entirely as a memory exercise, with students being required to identify features without any aural assistance. One report noted a concern that in some cases the ‘assessment outcome [was] not used to enable students’ progress’ (DESc 2008, p. 34). This highlights the importance of using assessment for formative, rather than summative purposes. The summative procedures used in assessing the JCMS consider the final product only, an approach not without its critics (Fautley and Daubney 2015; Elliott and Silverman 2015). Irish policymakers have identified links between formative school-based assessment and high educational standards in countries such as Finland and New Zealand (DES 2012, p. 4), and sought to incorporate this type of assessment into the new music programme.

Within the 2018 curriculum, students will engage in two classroom-based assessments (CBAs): a composition portfolio and a programme note to accompany the performance exam. The CBAs are to be assessed by the class teacher, though these will not contribute to the overall grade certified by the SEC. Internal assessment is a practice also evident in the assessment of music at General Certificate of Secondary Education (GCSE) level in England (Assessment and Qualifications Alliance [AQA] 2019), Wales (Welsh Joint Education Committee [WJEC] 2019) and Northern Ireland (Council for the Curriculum, Examinations and Assessments 2017). Teachers of the JCMP will be provided with an Assessment Toolkit and will also attend Subject Learning and Assessment Review meetings where they will discuss proposed marks with colleagues. In assessing the portfolio teachers must decide whether they think the content is ‘exceptional’; ‘above expectations’; ‘in line with expectations’; or ‘yet to meet expectations’. This is very similar to practice advocated by curriculum advisers in England where teachers are encouraged to grade outcomes according to a three-point scale and are provided with descriptors and indicative examples on a range of assessment criteria (Fautley

and Daubney 2015). At the end of the three-year JCMP students will complete a written exam (contributing to 70% of the overall mark)—intended for students to ‘engage with, demonstrate comprehension of, and provide written responses to stimulus material’ (NCCA 2017b, p. 24)—and a practical performance exam (contributing to 30% of the overall mark), both of which will be assessed externally by the SEC (see Table 8.2). External assessment of the performing element of the JCMP is unlike the system used at GCSE level in England (AQA 2019) and Wales (WJEC 2019) where such exams are recorded, internally marked and externally moderated. The first JCMP exams will take place in 2021.

Music at Junior Cycle: Changes in Pedagogy

The DES inspectorate (DESc 2008) highlighted a number of concerns in relation to the implementation of the 1989 JCMS. While noting some good practice, inspectors also highlighted a ‘lack of practical music-making experiences’ (p. 29), with the ‘integration of performing, composing and listening in the teaching and learning of music’ (p. 41) often not being considered during planning stages. This suggests that students are not always given the opportunity to experience musical concepts for themselves and that the three main parts of the course (performing, composing and listening) are seen as separate entities, rather than interconnected. The report also points to the individuality of students not necessarily being sufficiently supported or acknowledged, with a ‘lack of consistent profiling of students’ musical competencies’ (p. 36). Furthermore, it raised concerns that musical development is being compromised as a result of the exam-focused nature of some teaching.

The filtration of the exam-driven nature of the JCMS into the teaching of music often results in a teacher-led classroom. An exam-focused curriculum often gives the teacher a sense of security in that they know precisely what is to be taught. The JCMP places the teacher in a more precarious position and forces them out of their comfort zone. Moving from an exam-focused teacher-led environment, the JCMP places the student at the centre of their educational experience, with a shift towards informal learning—an approach adopted in a number of countries, such

as Sweden (Georgii-Hemming and Westvall 2010). Informal learning is championed by Lucy Green (2008) and is at the heart of Musical Futures. Ruth Wright (2016) notes that ‘alternative approaches to music education such as informal learning and non-formal teaching have had dramatic effects on music education in many parts of the world including the United Kingdom, Australia, United States, Singapore, Cyprus, and Canada’ (p. 3).

Teachers of the JCMP may now find themselves in a new space, with the role of the teacher as ‘sage on the stage’ being challenged. Research shows that while relinquishing some control can be daunting for teachers, with their role potentially being ‘unclear and sometimes [lacking] validity’ (Georgii-Hemming and Westvall 2010, p. 21), it can also provide them with opportunities to understand more about the learning practices of their students (Hallam et al. 2017). Furthermore, it can enhance communication between student and teacher, which helps to develop relationships and to build trust. Teachers also have the opportunity to act as a musical model. While the JCMP is in its infancy, and some concerns were raised during the consultation process, early anecdotal indications suggest that the new programme has encouraged teachers to ensure that tasks are approached in fun, interactive and creative ways. It would also appear that teachers are experimenting more with technology, incorporating the use of digital applications and various software programmes. While this is a necessary development given the place of technology in twenty-first-century music production, inadequate resources in some schools will result in a lack of opportunity to engage with such technology. In order to avoid a disparity in the opportunities available to our students, this issue requires consideration.

Potential Outcomes of the JCMP

While previous music curricula may be at odds with the musical lives of students the incorporation of music in the 2018 JCMP that is familiar to students together with music that may be unfamiliar will provide space for them to begin to make connections between music inside and outside of school, which in turn opens up a wealth of opportunities and allows

for deepened understanding and enlightened perspectives. Allowing students to engage with music with which they already have a relationship encourages, motivates and empowers, while the inclusion of unfamiliar music broadens students' horizons and possibilities.

The 2018 JCMP not only encourages teachers to consider the musical preferences of students, but also to provide 'equality of opportunity, participation and outcome for all' and to be 'inclusive of all students' (NCCA 2017b, p. 3). In contrast, the somewhat restricted nature of the JCMS may be confining and somewhat frustrating for the very experienced student, while its formality may be daunting and foreign for the inexperienced student. The level of flexibility that the JCMP affords has the potential to allow students to move at their own tempo, thus challenging students of all levels of experience and expertise. While the programme lends itself well to the use of differentiation, it also appears to align itself with the three core principles of Universal Design for Learning (UDL)—multiple means of engagement, multiple means of representation and multiple means of action and expression—and incorporates many associated UDL approaches including 'the use of technology, multiple modalities of instruction ... and group activities to give students choices and provide them with opportunities to empower themselves as learners' (Spencer 2011, p. 10). UDL is thought to 'improve and optimize teaching and learning for all people ... [and to] eliminat[e] barriers to students' learning' (Lieberman 2017, p. 5).

In contrast to the JCMS, which often denies students the opportunity to broaden their knowledge outside the realms of the curriculum itself, the JCMP actively encourages exploration and experimentation and affords the student the power to make decisions and to take risks. Through engaging with music in this open way, students are likely to take ownership of their work, to develop autonomy and to feel pride in their progress. This in turn contributes to the development of a student's musical identity: 'As students gain experience through their creating, participating and appraising of work ... they will be developing their critical skills and allowing their musical selves emerge' (NCCA 2017b, p. 13). Encouraging students to connect with and to develop their own musical identity will ensure that they have a lifelong relationship with music.

The move towards a student-centred environment, whereby the teacher may adopt a more informal role will also open up opportunities for the student. Research on Musical Futures (Hallam et al. 2008, 2017; Moore 2019) demonstrates a large number of positive outcomes associated with its implementation, including: enhanced music learning, collaboration, increased confidence and motivation, democratic and inclusive pedagogy, peer learning, assessment for learning and consideration of the individual (Moore 2019). Research also found an average increase of 42% in the uptake of GCSE music after implementation of the Musical Futures programme (Hallam et al. 2008). National statistics in Ireland (SEC, online) show that there is falloff of approximately 40% between students who sit the JCMS exam and those who sit the Leaving Certificate music exam. While acknowledging that not all schools offer music as a Leaving Certificate subject, it nonetheless raises questions as to the reasons behind this considerable decrease. As some of the core values of Musical Futures—inclusivity, relevance and sociability—are reflected in the JCMP, the new programme may help to increase the uptake of music at junior cycle and could in turn impact on the number of students choosing to study music for Leaving Certificate.

Consideration of the individual is emphasised in the JCMP, which notes the importance of ‘the development of the whole person’ (NCCA 2017b, p. 6), and social, physical and mental well-being. North et al. (2000) support a notion proposed by Mills (1997) that ‘secondary music teachers [should] give less emphasis to teaching music, and greater emphasis to teaching pupils’ (p. 270). However, Georgii-Hemming and Westvall (2010) observed that a reliance of the musical interests of students and a ‘focus on personal social development’ (p. 21) led to limitations of repertoire, content and teaching methods in the Swedish music education system. If a strong continuum between junior and senior cycle is to form it is vital that the development of the whole musician (Hallam 1998) is not overlooked. The role of the teacher is crucial in ensuring that students are prepared for the demands of the Leaving Certificate music programme and that music literacy, aural and musicianship skills are not neglected in the quest to connect with the external social and musical worlds of students. As the Leaving Certificate music course is not dissimilar to the 1989 JCMS in terms of its structure, and prescribed and

exam-focused nature, teachers may be forced to apply some of the pedagogical principles of the JCMP to the Leaving Certificate programme and may be inspired to approach the content in a more creative and interactive fashion than the syllabus itself perhaps encourages.

Summary

Despite the numerous criticisms directed at music education provision in Ireland over the past number of decades reform has been slow. Prior to the implementation of the JCMP, music at junior cycle had not changed in 30 years. In contrast, the last three decades have seen much development in terms of our understandings of best pedagogical practice, assessment procedures, subject content and student well-being. This chapter has highlighted the need for an inclusive and relevant programme that appeals to a broad range of students and in acknowledging the diversity of previous experience in music participation accommodates individual needs. It has also highlighted the importance of creating a programme that may go some way towards mending the existing fractured continuum which has been created by factors such as inconsistent music education at primary level, and the perception amongst students that 'school music' is outdated. The JCMP cannot ensure that all primary school students have access to music education. However, by aiming to be relevant and inclusive and by promoting student agency it does perhaps have the potential to cater for all, and therefore could perhaps not only mend the 'fractured continuum', but could also function as a starting point in the study of music for some. The JCMP reflects international trends towards student-centred informal learning, with collaborative and inclusive learning environments, a level of flexibility in course content and the incorporation of continuous assessment. In comparison with the majority of other classroom subjects music often takes a back seat, but the recent acknowledgement of the importance of the place and value of the arts particularly in the context of a STEAM education policy is encouraging in this regard.

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