



Scales to skills: A meta-analysis of music-integrated educational programs and life skills development

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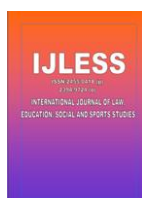
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Abstract

Music integrated education plays a transformative role in fostering cognitive, emotional and social development of children. Its impact on academic performance, creativity and overall well-being of students is highlighted in many research studies. Music integrated education is also found to enhance various soft skills viz., communication skills, problem-solving, self-esteem, punctuality and team skills. The present meta-analysis aims to review the research articles from various data sources to methodically examine the importance of music integrated educational programs in developing life skills. This analysis is based on the research articles published in various peer reviewed journals (n = 10) from different data sources like Google Scholar, Research Gate, MDPI and PLOS form 2000 to 2023. The PRISMA guidelines were used to identify the data base, record selection, retrieval of reports and selection of reports (n = 10) for analysis. The findings of the analysis reveals that majority of studies on music integrated educational programs scaffold the development of life skills among students. The studies where teachers/educators/music performers are the sample also highlight the need for music in classrooms and the skills like cooperation, collaboration and team spirit for better performance in their respective fields.

Key words: Music integrated educational programs, Life skills development

1. Introduction

Music-integrated educational programs have garnered increasing attention as potential catalysts for holistic development, extending beyond traditional academic domains to encompass crucial life skills (Habibi et al., 2022). The exploration of music's influence on cognitive, emotional, and social facets of human development has spurred a surge in research, seeking to elucidate the mechanisms through which musical engagement fosters well-being and enhances life skills (Campayo-Muñoz & Cabedo-Mas, 2017).

This meta-analysis seeks to synthesize the existing body of research on music-integrated educational programs, focusing on their impact on the development of various life skills, including cognitive functions, social skills, emotional regulation, and academic performance (Akin, 2023; Chong & Kim, 2010; Miendlarzewska & Trost, 2014). By systematically examining the findings of diverse studies, this meta-analysis aims to provide a comprehensive overview of the evidence and the effect of various music-integrated interventions.

The rationale for this meta-analysis stems from the growing recognition of the limitations of traditional educational approaches that primarily focus on cognitive development while often neglecting the cultivation of essential life skills. In an era characterized by rapid technological advancements and complex social challenges, individuals need to possess a diverse skill set that enables them to adapt, collaborate, and thrive in various contexts.

Music-integrated educational programs have gained attention for their potential to enhance cognitive, emotional, and social development in learners. This meta-analysis synthesizes empirical studies examining the effects of music-based interventions on life skills development, including emotional regulation, social skills, academic performance, and creativity.

General features of Music Integrated Education

The general features observed during the review are as follows -

- Music enhances cognitive abilities, social skill and emotional regulation, contributing to overall life skill development (Hallam, S. 2010).
- Music education fosters discipline, perseverance and self-confidence, which are essential life skills (Creech, A., and Gaunt, H. 2012)
- Structured music education can improve cognitive abilities, which are transferable to problem-solving and academic success (Schellenberg, E. G. (2004).
- Music education enhances executive functioning, memory and adaptability – the key components of life skills (Portowitz, A., et al. 2009)
- Music participation aids emotional regulation, a critical life skill for mental well-being (Saarikallio, S., and Erkkila, J. 2007)
- There is correlation between music education and academic achievement, suggesting transferable skills such as focus and time management (Wetter, O.E., et al., 2009)
- Music training improves spatial-temporal skills, which are linked to mathematical and problem-solving abilities (Hetland, L. 2000)
- Music integration in schools improves teamwork, communication and self-esteem (Bamford, A., and Glinkowski, P. 2010)
- Music participation correlates with improved social and academic outcomes (Southgate, D.E., and Roscigno, V.J 2009)

By observing the above features the need and importance of music integration in education to cater to the needs of developing life skills is understood by the researcher.

2. Methodology

The researcher adopted a systematic review method for the present study to include relevant reviews and to select the articles from authentic cites. The following steps were adopted for the analysis -

- Formulation of research questions.

- a. How does music integrated education benefit the development of life skills among students?
 - b. How does music integrated education benefit the development of life skills among teachers / educators?
 - c. Why music integrated education is necessary to develop life skills?
 - d. What are the constraints in integrating music in contemporary classrooms?
- Defining inclusion and exclusion criteria.
- a. Only ten research articles published in journals from 2000 – 2024, found on authentic cites were selected for analysis.
 - b. Articles were selected by assessing the study quality, analysing the procedure of each study to reassure the authenticity of selected articles.
 - c. The key words like 'Music integrated education', 'Music and life skills development', 'Role of music in life skills development' are used to search for the articles.
 - d. The data bases searched include Google Scholar, Research Gate, MDPI and PLOS.
 - e. More than 100 studies were found. A preliminary review considering abstracts, keywords and the entire structure excluded repetitions, books, book chapters and conference proceedings.

3. Analysis Of Music Integrated Education In Life Skills Development

Music-integrated education fosters holistic development, particularly in social-emotional learning. The duration and consistency of programs play a crucial role in effectiveness. The analytical aspects of this study are represented in Table.1

4. Limitations

As the present analysis selected research articles from four data sources, the publication bias may be there.

Studies with small samples might have inflated the results.

Different studies have used different assessment tools to measure the development of life skills leading to variability in measures.

As most studies are done in Western countries, the cultural differences will be there. Though some Indian studies related to music are found, they highlight the importance of music as a therapy and not as an intervention in educational practices and hence not included in this analytical study.

5. Conclusion

The present study aimed to analyse systematically the reviews of research articles, which studied the role of music integrated education in developing life skills. The study sought to explore various aspects of benefits of music integrated education in the development of life skills among students, teachers / educators and performers.

The analysis found out several factors which positively contribute to the development of life skills through music integration in education, whether it is classroom transaction, teacher training or performances. The studies revealed that music integrated education gave an affirmative result to enhance the life skills development.

Table 1: Summary of studies on music-integrated education and life skills development

Sl . N o.	Partici pants	Interve ntion	Researc h type	Dura tion	Data source	Results	Key findings	Discuss ion	Limitati ons	Recommen dations	Conclu sions
1	30 teachers & subject advisors	-	Mixed-method	-	Google Scholar	93.3% lacked formal music training	Music treated as a 'filler' subject	Mentoring impact must be tracked	Geographical bias; small sample	Revise B.Ed. programs; more arts time	Urgent reforms in training & policy
2	Music pedagogy students (HE)	3 projects (Film music, Rock/ Opera, Popular music)	Comparative, demonstration	-	Google Scholar	Students gained professional, digital & research skills	Strengthened musicological & IT competence	Future teachers may rely on self-learning	Limited formal structures	Include popular music in curriculum	Preparedness improves with diverse genres
3	120 primary & secondary students	-	Mixed-method	-	ResearchGate	Music enhances teamwork & emotion management	Builds empathy, confidence, communication	Music enriches holistic development	Regional & cultural sample limits	Explore diverse activities' impact	Promotes social skills & all-round growth
4	Multiple studies (systematic review)	Solo, collective, instrumental	Interpretative, retrospective	4 months	MDPI	Music improves soft skills	Enhances teamwork, creativity, leadership	Musical practice aids life skills	Limited study pool	Expand studies & contexts	Music effective for life skill acquisition
5	15 adolescent musicians (12-18)	Ensemble playing	Explorative qualitative (interviews)	-	PLOS	Ensemble builds confidence & cognitive skills	Improved communication, critical thinking	Music-making fosters motivation & efficacy	Small sample size	Collaborate schools & hubs; longitudinal studies	Music ensembles nurture life skills
6	Children (9 & 12 yrs)	-	Quasi-experimental	-	Google Scholar	Extended music boosts school life quality	Benefits social aspects of schooling	Measurable social outcomes	Rare in long-term schooling	Sustain extended music programs	Proves music's social benefits
7	87 undergrads & 69 postgrads	Psychological techniques in music ed.	Pretest-intervention-posttest	1 year	Google Scholar	Posttest showed gains over control group	Music enhances emotional intelligence	Supports personality growth	Narrow sample	Integrate arts in UG curriculum	Helps transition adolescence → adulthood

8	Young adults with Williams Syndrome	Case studies, interviews, observations	Qualitative, theory building	6 weeks	MDPI	Music built life skills & self-confidence	Promoted belonging, competence	Music vital for marginalized groups	Preconceptions about WS	Focus on strengths, not deficits	Music aids vocational & social growth
9	Teachers, students, parents, experts	Document analysis & surveys	Mixed	-	ResearchGate	Music evokes emotions & values	Builds creativity, motivation & aesthetics	Music undervalued vs. STEM	Music seen as secondary	Involve school, family, society	Music fosters emotions & creativity
10	326 Chinese university students	Survey, SEM analysis	Empirical	-	PLOS	Music improves wellbeing & academics	Strong link between music & mental health	Wellbeing mediates academic success	Limited to China	Policy-level integration of music ed.	Supports music for academic + mental health

Analysing meta data from selected ten articles suggests that the integration of music in education as an effective structured music intervention promotes emotional, social, and cognitive growth among students.

The constraints for music integrated education in contemporary classrooms is the lack of teacher trainings with respect to innovative inclusion of musical pedagogies in language and subject teaching.

Most of the studies are from abroad and only a few studies which are available in India measure long-term impacts of music as a therapy. The studies conducted in India so far on integration of music for academics is very less. More empirical research is needed in India on music integration in classroom transactions to help students to imbibe life skills, language improvement and conceptual understanding of subjects like science and to become self-confident and self-efficient.

6. Recommendations

The study recommends that further studies can investigate the usage of music integration in educational processes such as language learning, academic achievement, concept formation, personality development etc.

The study recommends the policy makers to advocate for music programs in school curricula, to create a studio model approach, especially for smaller classes to demonstrate different genre of music and to nurture the emerging vibe of music creation.

More longitudinal studies can help to understand the long-term impacts.

Educators are to be trained in music-integrated pedagogies.

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