

**"ION CREANGĂ" STATE PEDAGOGICAL UNIVERSITY
FROM CHISINAU**

Presented as manuscript
C.Z.U.: 37.091.3:373.2:78(043.3)

BADARNE Belal

**THE MODEL OF INTEGRATING MUSICAL ACTIVITIES INTO THE
EDUCATIONAL PROCESS IN PRIMARY EDUCATION**

531.01. GENERAL THEORY OF EDUCATION

PhD thesis in educational sciences

Scientific supervisor:

SILISTRARU Nicolae,
Habilitation doctor in pedagogy,
University professor

Author:

CHISINAU, 2026

© **BADARNE, BELAL, 2026**

TABLE OF CONTENTS

ANNOTATION (Romanian, English)	4
ABBREVIATIONS LIST	6
INTRODUCTION	7
1. THEORETICAL FOUNDATIONS OF THE INTEGRATION OF MUSICAL ACTIVITIES	20
1.1. Theoretical concepts and attitudes on the integration of arts into teaching.....	20
1.2. Pedagogic and Psychological dimensions of music integration into the teaching of other disciplines	30
1.3. The correlation between music and elementary school disciplines (Arabic, Hebrew, English as a foreign language, Math, Science, and Religion)	43
1.4. Conclusions to chapter 1	49
2. DEVELOPMENT OF THE PEDAGOGICAL MODEL FOR THE USE OF MUSICAL ACTIVITIES IN THE EDUCATIONAL PROCESS OF PRIMARY EDUCATION.....	51
2.1. Integrated Core Curriculum into Music Education	51
2.2. Approaches to teachers' attitudes and efficiency in integrating music into the teaching of other disciplines	61
2.3. Theoretical Foundations for the Development of the Pedagogical Model for Integrating Musical Activities into the Teaching of Other Subjects in Primary Education.....	76
2.4. Core Program in Music Education	90
2.5. Conclusions to Chapter 2	104
3. METHODOLOGICAL PERSPECTIVES OF MUSIC INTEGRATION INTO THE TEACHING OF OTHER DISCIPLINES	106
3.1. Ascertaining the level of teachers' attitudes and application of music integration into teaching and music integration effect on students	106
3.2. Formative value of the Pedagogical Model of music integration into the teaching of other disciplines	115
3.3. Conclusions to chapter 3.....	141
3.3.1. Discussion and Validating Values	141
3.3.2. Disadvantages of the research	149
GENERAL CONCLUSIONS AND RECOMMENDATIONS	155
BIBLIOGRAPHY	159
APPENDIXES	173
AUTHOR'S STATEMENT	182
AUTHOR'S CV	183

ADNOTARE

Badarne Belal,

Modelul integrării activităților muzicale în procesul educațional din învățământul primar,
teză de doctor în științe ale educației, Chișinău, 2026

Structura tezei: introducere, 3 capitole, concluzii generale și recomandări, bibliografie 181 de surse, 145 de pagini de text de bază, 4 anexe, 14 tabele, 23 diagrame, o figură.

Publicații la tema tezei: 10 lucrări științifice, trei dintre care au fost publicate în străinătate, 2 articole în reviste naționale de categoria C, 3 articole la conferințe internaționale, 1 articol la o conferință națională și 3 publicații electronice.

Cuvinte cheie: muzică, predare, integrare, învățători, atitudini, metode, școală elementară, educație primară, model pedagogic, program metodologic.

Domeniul cercetării: Teoria generală a educației

Scopul cercetării rezidă în fundamentarea teoretico-metodologică de elaborare și valorificare a modelului pedagogic de integrare a activităților muzicale în alte discipline ale învățământului primar pentru integrarea activităților muzicale în școlile elementare ale educației primare din sectorul arab, Israel.

Obiectivele cercetării sunt: 1) stabilirea premiselor teoretice pentru integrarea activităților muzicale în procesul didactic; 2) identificarea *principiilor, factorilor și condițiilor pedagogice* orientate spre integrarea activităților muzicale în didactica altor discipline ale învățământului primar; 3) identificarea conținuturilor curriculumului și eficacitatea învățătorilor cu privire la integrarea muzicală în procesul didactic al școlilor arabe israeliene; 4) elaborarea și validarea experimentală a modelului pedagogic de integrare a activităților muzicale; 5) descrierea valorilor obținute experimental din aplicarea metodologiei ședințelor, elaborarea concluziilor generale și a recomandărilor practice.

Noutatea și originalitatea științifică a cercetării: sunt argumentate de actualizarea semnificației fenomenului valorificării muzicii în cadrul predării disciplinelor din învățământul primar, argumentarea conținuturilor ședințelor axate pe principii, condiții și factori pedagogici, elaborarea Modelului pedagogic și Programul de integrare a activităților muzicale în didactica altor discipline din învățământul primar din Israel (sectorul arab).

Rezultatele obținute care contribuie la soluționarea unei probleme științifice importante în cercetare: fundamentarea teoretică și praxiologică a Modelul pedagogic de integrare a activităților muzicale în didactica altor discipline din învățământul primar; descrierea unor metode și procedee care contribuie la eficientizarea integrării activităților muzicale în contextul predării disciplinelor din învățământul primar; contribuția semnificativă a Programul integrării activităților muzicale în contextul predării disciplinelor din învățământul primar, la accentuarea motivației pentru studierea muzicii a școlarului mic și la creșterea calității procesului de învățare.

Problema științifică soluționată în cercetare: fundamentarea conceptuală și praxiologică a funcționalității modelului pedagogic de integrare a activităților muzicale prin valorificarea programului metodologic de integrare orientat spre calitatea educației în școlile arabe din Israel.

Semnificația teoretică a cercetării: rezidă în stabilirea fenomenului de valorificare a muzicii în învățământul primar sub aspectul dominantelor psihologice și pedagogice, argumentarea programului de valorificare a muzicii ca obiect de integrare în disciplinele ciclului primar în context curricular prin principii, factori și condiții pedagogice.

Valoarea aplicativă a cercetării rezidă în elaborarea și validarea ansamblului de instrumente pedagogice și fundamente teoretico-metodologice, înglobate în Modelul pedagogic de integrare a activităților muzicale în didactica altor discipline din învățământul primar, bazat pe Programul metodologic cu integrarea educației muzicale în disciplinele din învățământul primar.

Implementarea rezultatelor științifice s-a realizat în cadrul școlilor elementare arabe israeliene din Galeeli și din Negev.

ANNOTATION

Badarne Belal

The Model of Integrating Musical Activities into the Educational Process in Primary Education

Doctoral dissertation in Education Sciences, Chişinău, 2026

The dissertation consists of an introduction, three chapters, general conclusions and recommendations, a bibliography comprising 181 references, 145 pages of the main text, 4 appendices, 14 tables, 23 charts, and 1 figure.

Publications related to the dissertation topic: 10 scientific publications, including three published abroad, two articles in Category C national journals, three papers presented at international conferences, one paper presented at a national conference, and three electronic publications.

Keywords: music, teaching, integration, primary school teachers, attitudes, methods, elementary school, primary education, pedagogical model, methodological program.

Research field: General Theory of Education.

The aim of the research is to provide the theoretical and methodological foundation for the development and implementation of a pedagogical model for integrating musical activities into other primary school subjects, with a view to enhancing the integration of musical activities in Arab-sector primary schools in Israel.

The research objectives are: (1) to establish the theoretical premises for integrating musical activities into the teaching and learning process; (2) to identify the pedagogical principles, factors, and conditions that facilitate the integration of musical activities into the teaching of other primary school subjects; (3) to identify the curricular content and examine teachers' effectiveness in implementing musical integration within the educational process in Arab schools in Israel; (4) to develop and experimentally validate a pedagogical model for integrating musical activities; and (5) to analyze the experimental results obtained through the implementation of the methodological program and formulate general conclusions and practical recommendations.

The scientific novelty and originality of the research consist in substantiating the educational significance of integrating music into the teaching of primary school subjects, justifying the content of the methodological sessions based on pedagogical principles, conditions, and factors, and developing a Pedagogical Model and a Methodological Program for integrating musical activities into the teaching of other primary school subjects in the Arab sector of Israel.

The research results contributing to the solution of an important scientific problem include the theoretical and praxeological substantiation of the Pedagogical Model for integrating musical activities into the teaching of other primary school subjects; the identification and description of teaching methods and instructional strategies that enhance the effective integration of musical activities into primary education; and the demonstration of the significant contribution of the Methodological Program for integrating musical activities to increasing young learners' motivation to study music and improving the quality of the teaching and learning process.

The scientific problem addressed by this research lies in the conceptual and praxeological substantiation of the functionality of a pedagogical model for integrating musical activities through the implementation of a methodological integration program designed to enhance the quality of education in Arab schools in Israel.

The theoretical significance of the research lies in conceptualizing the educational value of music in primary education from psychological and pedagogical perspectives and in substantiating a methodological framework for integrating music into the primary school curriculum through pedagogical principles, factors, and conditions.

The practical significance of this research lies in the development and experimental validation of a comprehensive system of pedagogical tools and theoretical-methodological principles integrated into a pedagogical model for incorporating musical activities into the teaching of other primary school subjects.

This model is based on a methodological program that supports the integration of music education into the content of the primary education process.

The implementation of the scientific results was carried out in Arab primary schools located in the Galilee and the Negev regions of Israel.

ABBREVIATIONS LIST

ABC - Arts in the Basic Curriculum;

MPIM –Model Pedagogical Integrating Music

RITA - Reading Improvement through the Arts;

MENC - Music Educators National Conference;

NSME - National Standards for Music Education;

LTTA -Learning through the Arts;

EFQM - the European Foundation for Quality Management.

INTRODUCTION

The topicality and importance of the research topic. The need to create beauty and to live in a beautiful environment was affirmed in prehistory in the process of making objects (tools, utensils, habitat spaces, etc.) of practical utility. But the natural environment of human existence always required them (people) to adapt the action of modeling these objects to natural conditions (light, temperature, humidity, wind, etc.), which represents an action of harmonizing human actions with nature, harmony being the first principle of beauty. Thus, man began to build objects that combined the useful with the beautiful – a phenomenon defined by Plato as the principle of the useful and the beautiful, the pleasant [Cf.: 162], represented in shapes, colors, ornaments, decorations.

Existing research generally highlights a positive and mutually beneficial connection between music and education. It also emphasizes the importance of providing all teachers with training in methods for incorporating music into the learning process.

Nevertheless, some educators may be reluctant to apply such approaches in the classroom, often because of previous difficulties in elementary music lessons or limited experience with cross-curricular musical integration.

Encouraging primary school teachers to recognize the educational potential of music, while strengthening their confidence and fostering positive attitudes toward its use, can enhance their ability to incorporate musical activities effectively into everyday teaching.

The present research is centered on primary education teacher's attitudes and effectiveness regarding integrating music into the teaching process and suggests an integrative music program. In the present research, there is an experimental group and a control group. Teachers in the experimental group were exposed to the Pedagogical Model of integrating music into the teaching of other disciplines in primary education, so that their attitude and effectiveness were examined before and after the application of the program.

Education experts have defined teaching as the most vital component of education. In this context, the magazine *A Handbook for Policy Makers*, published by the European Commission, emphasizes that the teacher is the most influential factor that determines the quality of education in schools [59]. Recent technologies of modern didactics and their implementation in practice allow Israel to align its educational policy with the value system of the contemporary world and to streamline and restructure the education system as a whole.

The act of teaching and education requires from the teacher an increased degree of professionalism - of documentation, training and directing the instructive-educational process, of evaluation of school situations and results. The modern teacher is a designer and manager of school learning experiences: representations, notions, principles, etc. regarding the objects and

phenomena of the external world and the relations between them, to which are added the mental operations, thanks to which the knowing subject can engage in the transformation of reality, including in a practical-action plan. The constant, and therefore essential, characteristics determine the knowing subject to synthesize or condense them into notions and legitimacies, which thus become intellectual values, continuously feeding his cognitive system [29].

As L. Ciolan states, **holism** is a theory that emphasizes the structural and/or functional relationships between parts and the whole, abandoning the exclusive focus on the separate elements of a system. We recall that the working procedure of holism involves the reconstruction "from the bottom up", trying to capitalize on the information that is lost by breaking the whole into component parts (a procedure specific to reductionism). Holism means "the irreducibility of the whole to its component parts, the superiority (not necessarily quantitative) of the whole over the sum of its parts, and the **integral and integrated** vision of the objects, phenomena or processes studied" [15, p. 117].

In the statement of A. Mucchielli, **integrality** is a complex totality made up of elementary units between which there is a network of relationships that are solidarized and is linked to the first operation of the mind, being a model of knowledge [apud.15],

If we talk about the **stages of integration**, it is natural that the lines of demarcation between them are mobile and permeable. Integration is a dynamic process, which can easily "move" from one level to another, from one step of the continuum to another. The analytical rationality of the holistic approach, according to L. Ciolan [15, p. 135], is based on: 1. dividing the whole into component parts; 2. analyzing and explaining these parts independently; 3. juxtaposing partial explanations in order to configure an image of the whole.

The most radical phase of *integration*, in the opinion of researcher L. D'Hainaut [apud.14], is **transdisciplinarity** - the interpenetration, *the fusion* of several disciplines, in the form of curricular integration. **Transdisciplinary integration** "fully represents a *holistic*, global curricular approach" confirms V. Chiş [14, p.22].

The adoption of a **transdisciplinary approach** tends towards a complete "decompartmentalization" of the objects of study, it goes progressively, from the closest variant to the model (multidisciplinarity) to the total *dissolution* of disciplinary barriers (transdisciplinarity), and the competencies and curricular contents are integrated around certain problems, stated by the authors V.I. Guţu and M. Vicol [apud.14],

Various theories of knowledge, developed by philosophy, psychology and musicology, and knowledge learning, developed by psychology, general pedagogy and pedagogy of the arts, as well as contributed to the establishment of a didactics of arts, whose component is also the field of teaching methods.

- *in general philosophy and philosophy of art, philosophy of music*: the triadic delimitation of cognitive philosophical categories I. Kant [35]; the triadic concept in philosophy (syncretism-analysis-synthesis) Hegel [33]; delimitation of scientific knowledge from artistic knowledge; the concept of musicosophy C.Bârzea [5]; I.Gagim [26];

- *in general psychology and music psychology*: the theory of musical skills M. Cosumov [16]; psychoenergetic theory of music T. Bularga [8]; the theory of the dynamic nature of harmony V. Vasile [47]; the biphasic theory in the knowledge of music “perception and perception” of the sound message I. Gagim [26]; the proto-psychological concept of music, musical knowledge I.Gagim [22]; extensive knowledge of music I.Gagim [25]; the triadic system in the general development of psychic functions: I-M-T M. Vacarciuc [46];

- *in musicology*: the algorithmic theory sound-consciousness V. Vasile [47]; functional theory of music G.Breazu [7]; intonational theory of music I.Gagim [27]; the concept of the message in music (dynamic, structured based on a hierarchy) I.Gagim [25]

- *in general pedagogy and arts pedagogy*: the concept of operative cognitivism [133]; the concept of music education I.Gagim [28].

The field of teaching methods has not remained unaffected by these changes both at the conceptual level and at the curricular level, on the contrary, thanks to valuable methodological studies conducted by Bresler [79; 9] and Leonhard [126], became a precedent for the whole educational process. In this context, the methods of integrating the arts appear as a time imperative designed to give education an effective and conscious character that would generate significant changes in personality, cognition, meta-cognition and self-training [83].

The field of teaching methods turns its attention to the artistic aspects of teaching, therefore approaches to the integration of the arts in teaching have emerged [126]. The use of the arts in teaching is considered a stimulator of knowledge, forms a flexible personality and fits into any cultural and educational space [89]. Methods of integrating music are one of the main methods of integrating the arts used in teaching in elementary school classes [7]. Its importance is mentioned by Bresler [79], Merrell [133] and Krashen [121], where it appears as a principle of progress of a major importance.

Modern didactics is based on new psycho-pedagogical foundations. Teaching is not synonymous with saying, possibly dictating, and asking students for verbal reproduction of assimilated information in the next lesson. Teaching is defined in close relation with educational objectives, teaching (in the didactic sense) means organizing and directing school learning experiences. The management of school learning experiences includes a series of concrete operations, such as: presentation of facts, examples, models, exhibits; involving students in activities of exploration and transformation of reality; deducing the essential and formulating it in

definitions, laws, principles, rules; organizing and encouraging the act of learning / assimilation of the didactic offer [26].

Modern teaching is an act of communication between the two subjects of the pedagogical act, the teacher and the student; it objectifies the competences of the educated, organizes the didactic offer.

Thus, it is necessary to apply teaching strategies that match the methods of integrating music and improve the development of music learning capacity.

This study refers to the attitudes of primary school teachers towards the effectiveness of music integration on students and the efficacy of teachers (sense of ability) to use methods of integrating music in teaching in primary education.

Consequently, **the actuality of our research ensues from:** the need to motivate teachers to use teaching methods with the implementation of music; to increase its effectiveness and to change their attitude towards musical integration in teaching.

Building on these ideas, there is an increasing need to implement teaching strategies that align with the integration of the arts and music and foster the development of teachers' ability to teach through music. Initiatives proposed by representatives of artistic organizations have been transformed into curricular projects and instructional materials. For instance, the teaching and learning of core subjects through the arts have been promoted through projects such as RITA (Reading Improvement through the Arts) and ABC (Arts in the Basic Curriculum). [8].

Human beings naturally exhibit interdisciplinary thinking, which constitutes an essential characteristic of learning and understanding the world [57]. Within this interdisciplinary framework, numerous contemporary scholars have emphasized the role of motivation in the educational process. Among them, N. Silistraru defines motivation as the individual's "dynamic and directional aspect" [59, p. 47], while M. Şevciuc highlights the dimension of interest as a "motive, a means of instructional activity, and a component of personality" [49, p. 37]. These assumptions are supported by theoretical research and confirmed through educational practice.

Accordingly, primary school teachers are expected to design educational processes that meet the fundamental requirements of contemporary education. Stimulating pupils' curiosity and fostering their desire for knowledge from the very first lessons constitute not only a primary educational objective but also an essential prerequisite for developing sustainable competencies relevant to today's society. This objective can be achieved through an interdisciplinary approach to educational content, which facilitates a deeper understanding of real-world phenomena and relationships. Such an approach is particularly important during the primary school years, as it motivates pupils to explore knowledge and recognize its practical relevance.

The theoretical and practical significance of the present research lies in its alignment with

the current curricular paradigm of national primary education. This paradigm requires an integrated approach to curriculum components, including the structure and organization of the educational process, the design of curricular content and learning objectives, the systematic integration of teaching materials, and the active involvement of teachers in planning and implementing educational activities [77]. These perspectives are supported by the work of E. Joița [47, pp. 109–111] and P. Popescu-Neveanu [54, p. 151].

Nevertheless, not all primary school teachers recognize the importance or educational value of implementing music-integrated instructional methods. This reluctance often stems from unsuccessful experiences with music lessons in elementary education and from limited confidence in the effective integration of music into classroom teaching.

Helping primary school teachers recognize the educational value of integrating musical activities into their instructional programs—and encouraging them to realize that they are fully capable of doing so by building on their own strengths and maintaining positive attitudes toward music integration—can substantially increase their success in incorporating musical activities into the teaching process.

Curriculum integration, or the integration of school subjects, represents a multidimensional process of establishing relationships among different content areas and disciplines, enabling them to interact, merge, and form a coherent whole that exceeds the sum of its individual components (L. Ciolan) [17].

Starting from Johann Heinrich Pestalozzi's assertion that children should be allowed "to see, to hear, to discover, to fall, then to rise again, and even to make mistakes. Do not use words when action itself is possible" [52, p. 1], learners are placed in a stimulating and interdisciplinary educational environment. Such an environment promotes constructive dialogue and collaboration among subjects such as Romanian Language and Literature, Hebrew, Mathematics, Music and Movement, Personal Development, Visual Arts, and Practical Skills, with the primary objective of fostering learners' interest in education. Since development is a long-term process, an interdisciplinary approach to curriculum content represents an effective means of enhancing pupils' motivation. Naturally, interdisciplinarity offers substantial benefits in primary education by providing meaningful learning experiences, broadening pupils' horizons, improving academic achievement through the stimulation of critical and creative thinking, and fostering the development of essential competencies. These perspectives are supported by numerous researchers, including T. Callo [12], O. Dandara [27], I. Neacșu [50], A. Darawsha [111], I. Gagim [33], and I. Kant [48].

L. Vygotsky argues that the **Zone of Proximal Development** is particularly relevant to primary education, as it provides the foundation for children's subsequent biological,

psychological, social, and cultural development [67].

These considerations support the adoption of an integral pedagogical paradigm for promoting music in primary education, one that is centered on the holistic formation and development of the learner's personality. Personality development requires attention to all developmental domains, as the child is a complex being whose growth encompasses multiple dimensions. An integrated personality may be understood as a multifunctional system comprising the following subsystems: the orientation and motivational subsystem (needs, aspirations, motivation, interests); the bioenergetic subsystem (somatic constitution and nervous system characteristics); the instrumental subsystem (knowledge, skills, abilities, competencies, and attitudes); and the rational-value subsystem (character). Learners should therefore be provided with opportunities to engage their full potential, thereby ensuring the effective integration of music into the educational process in primary education.

The adoption of a **transdisciplinary approach** aims at the complete removal of boundaries between school subjects. It progresses from the form of integration closest to the traditional disciplinary model—multidisciplinarity—to the complete dissolution of disciplinary barriers through transdisciplinarity. Within this framework, competencies and curriculum content are organized around authentic problems rather than isolated disciplines, as emphasized by V. Guțu and M. Vicol [44].

Description of the research situation and identification of the research problem: Music integration methods are one of the main methods of arts integration, used in the teaching process in elementary school classes [7]. Its importance is mentioned by Bresler [77], Merrell [133] and Krashen [121], where it appears as a principle of progress of major importance. A number of contemporary authors subscribe/examine/develop the characteristics of active and interactive teaching and training T. Cartaleanu [11], V.Goraș-Postică [32]; M.Călin [12]; I.Cerghit [13], I.Radu [43], L.Sadovei [44], E.Joiță [34], C.Mureșan [37]; C.-L.Oprea [39], V.Pălărie [40]; Ș.Popenici [41]; D.Potolea [42]; V.Vasile [47], I.Gagim [26], addressing all their aspects: projective (designed curriculum) and processual (taught curriculum, teaching-learning/study-evaluation methodologies), subjective (action of teaching-learning subjects) and objective (characteristics of the subjects taught), of educational purposes (competences-traits-behaviors-skills), advancing similar concepts [14].

This study examines elementary school teachers' attitudes and their effectiveness towards integrating music into their teaching in primary school in general.

Students in several teacher training colleges and universities specializing in primary education are required to take a course in music integration methods in order to obtain a degree in their field [74; 77; 147]. These courses are designed to equip prospective teachers with the

knowledge and skills required to adopt a holistic approach to classroom teaching and learning, while also fostering positive perceptions of the importance of music in their students' lives. [6].

However, the importance of music integration methods is not always recognized by teachers whose attitudes, opinions and effectiveness are low. This affects their performance as teachers [6].

According to I.Gagim, the relationship between teaching methods and other elements of educational activity allows the teacher to make creative adaptations to educational objectives and contents, to school assessment, through the interdependence of communication - knowledge - pedagogical creativity actions at the level of any instructional - educational activity. This ensures the informative - formative unity of the teaching activity, regulates the ratio of objectives - contents - methodologies [16].

Thus, it is very important for music methodology instructors to know that an introductory music course is necessary for elementary education graduates to help them understand how to confidently and successfully integrate music into their curriculum when they become teachers [57].

Degree of investigation of the problem and premises of the research:

Integrating music into teaching has been studied in several researches, including:

- Bresler [77] studied the field of integrating music into teaching.

- Hallam and Price [102, 147], Isaacson [114] and Jackson [115] and Merrell [133] conducted studies on the effects of integrating music into teaching children.

- Battersby and Cave [74], Hash [103] and Kretchmer [122] conducted studies on the preconceived attitudes, confidence, opinions and effectiveness of classroom researchers for integrating music into the elementary curriculum. In one of their studies, Battersby and Cave [74] point out that one of the biggest obstacles hindering the process of integrating music into teaching is that the teacher does not have positive attitudes towards integrating music and has low effectiveness in terms of musical cooperation.

The methodological component of *Music Education* is promoted and developed by several authors from the Republic of Moldova, such as T. Bularga [8], 1999, M. Vacarciuc [46], 2016, I. Gagim, 2004 [28], their research object being focused on the action dimension of music education, achieved through methods and procedures/techniques of teaching knowledge and training capacities and attitudes, thus valorizing various aspects of the specific character of music.

In his studies, scholar I.Gagim:

- a) outlines his own ways of similarizing the curricular contents by acquiring musical knowledge; pupils discover the laws of sounds: the four properties (duration, pitch, intensity, timbre) form the musical language; rhythm, measure, melody, harmony, dynamics, sound color give rise to the sound image [28, p. 138-139];

b) proposes three phases of forming musical skills: I. *feeling-experiencing*; II. *practical application in different forms* (performance, audition, creation, artistic characterization); III. *“theoretical” awareness* [28, p. 77];

c) specifies that the acquisition of knowledge about music has a broader significance than that given by the elementary theory of music: its functions are not limited to the knowledge of certain notions, terms, categories, laws, data, composers, but contribute to the practical assimilation of music, to the perception-understanding-interpretation of the artistic image;

d) delimits two levels of music education: *theoretical-musicological and theoretical-technological*; the very action of forming skills, follows the path of sensing-experiencing-discovery-accumulation of musical impressions - awareness-formulation of definitions/rules-memorization.

But, at the level of conceptualizing and implementing the integration of music in the didactic field, the attitudes and effectiveness of the teacher in Israel remain an aspect that is still little explored. Under these conditions, it is very necessary to develop a technological model for implementing this method, which will contribute to the teaching process of the five main didactic subjects at the Ministry of Education and will favor and stimulate inter-understanding.

A review of the scientific literature on the use of musical integration in teaching revealed several inconsistencies between teachers' attitudes toward integrating musical activities, their beliefs about the role of music in education, their self-efficacy regarding musical integration, the pedagogical knowledge acquired during their academic preparation, and the practical needs encountered in school settings. These findings led to the formulation of the following research **contradictions**, which were incorporated into the study:

- between teachers' attitudes toward the integration of musical activities and the need to effectively capitalize on the educational potential of musical integration in primary education;
- between the pedagogical knowledge acquired by primary school teachers during their academic training and the absence of effective interdisciplinary mechanisms for improving this educational practice;
- between the need for a pedagogical model for integrating musical activities across different school subjects and the lack of structured programmes for integrating musical activities into the primary school curriculum.

Many countries deal with these contradictions using special introductory programs in which they all emphasize content. However, the contradictions listed above open up a new opportunity while taking into account music integration and not emphasizing the content of teaching methods.

The issues outlined above give rise to the following **research problem**: What theoretical and methodological foundations can ensure the effective integration of musical activities into the educational process in primary education?

The **aim of the research** is to provide the theoretical and methodological foundation for the development and implementation of a pedagogical model for integrating musical activities into other primary school subjects, thereby facilitating the effective integration of musical activities in primary schools within the Arab sector of Israel.

Research Objectives

The objectives of the research are to:

- establish the theoretical premises for integrating musical activities into the teaching and learning process;
- identify the pedagogical principles, factors, and conditions that support the integration of musical activities into the teaching of other subjects in primary education;
- identify the curriculum content and examine primary school teachers' self-efficacy regarding the integration of musical activities into the instructional process in Arab schools in Israel;
- develop and experimentally validate a pedagogical model for the integration of musical activities;
- analyse and interpret the experimental results obtained through the implementation of the research methodology, and formulate the general conclusions and practical recommendations.

General Research Hypothesis

The effective integration of musical activities into other subjects taught in primary education can be achieved provided that:

- the theoretical and methodological foundations for integrating musical activities into primary education subjects are identified and implemented;
- the opportunities for engaging pupils in meaningful learning situations are effectively utilized;
- the curriculum is implemented through learning situations developed and tested within the Pedagogical Model for the Integration of Musical Activities into the Teaching of Other Primary School Subjects through the application of the methodological programme.

Research Methodology: The research methodology comprised several categories of methods:

Theoretical methods: synthesis, generalization, classification, systematization, comparison, modelling, and literature review.

Empirical methods: observation, testing, questionnaires, interviews, diagnostic, formative, and summative (control) pedagogical experiments.

Statistical methods: Cronbach's alpha, two-way analysis of variance (two-way ANOVA), one-way analysis of variance (one-way ANOVA), and other statistical procedures.

At the level of **theoretical conceptualization**, the research employed scientific and bibliographic documentation, epistemological synthesis and induction, deduction, conceptual analysis, theoretical modelling, hermeneutic analysis, scientific argumentation, pedagogical experiment design, observation, data collection, statistical analysis, systematization, and interpretative synthesis.

At the **experimental level**, the research utilized questionnaires, interviews, and a pedagogical experiment comprising diagnostic, formative, and control stages.

Scientific Novelty and Originality. The scientific novelty and originality of the research consist in highlighting the educational significance of integrating music into the teaching of primary school subjects; substantiating the content of instructional sessions based on pedagogical principles, conditions, and factors; and developing the **Pedagogical Model** and the **Programme for the Integration of Musical Activities into the Teaching of Other Primary School Subjects** for primary education in the Arab sector of Israel.

Scientific Problem Solved. This research addresses the scientific challenge of conceptually and praxeologically grounding a pedagogical model for the integration of musical activities through the implementation of a methodological integration program designed to enhance the quality of education in Arab primary schools in Israel.

The Theoretical Importance of the Research The theoretical significance of the research lies in establishing the educational value of music in primary education from psychological and pedagogical perspectives and in substantiating a programme for integrating music into the curriculum of primary school subjects through pedagogical principles, factors, and conditions implemented in authentic learning situations.

Practical Value of the Research. The practical contribution of this research lies in developing and validating a pedagogical model, supported by methodological guidelines, for integrating musical activities and music education into the teaching of primary school subjects.

The research also contributes to identifying the challenges encountered by primary school teachers in integrating musical activities into classroom instruction, analysing induction programmes designed to facilitate teachers' implementation of musical integration, and developing and validating a set of pedagogical tools incorporated into the proposed pedagogical model. Furthermore, it formulates practical recommendations concerning the content and importance of enhancing teachers' self-efficacy and attitudes toward musical integration, while providing a

framework that encourages and empowers teachers to incorporate music into their teaching practice.

In addition, the study recommends introducing a university-level course on the integration of musical activities into teacher education programmes for pre-service teachers. By addressing a broad range of theoretical and practical issues, the research findings have the potential to significantly improve the teaching–learning–assessment process in primary education.

Main Scientific Results Submitted for Public Defence. The theoretical and empirical research conducted enabled the identification of a theoretical and methodological framework that represents a reflective process aimed at fostering primary school teachers' awareness of integrating musical activities into other primary education subjects within the teaching–learning–assessment process.

Through the methodological and educational dimensions of the proposed **Pedagogical Model**, the research demonstrated the capacity of musical activity integration to contribute to pupils' education by developing a comprehensive set of competencies, character traits, behaviours, and musical attitudes. This is achieved through a methodological system for designing and effectively implementing lessons based on appropriate teaching strategies, methods, and instructional techniques.

The implementation of the **Pedagogical Model for the Integration of Musical Activities into the Teaching of Other Primary School Subjects** proved its functionality by fostering positive attitudes toward the integration of musical activities across the primary school curriculum.

Implementation of the Scientific Results. The scientific results were implemented in Arab primary schools located in the Galilee and the Negev regions of Israel.

Dissemination and Validation of the Scientific Results. The main findings of the research have been shared through peer-reviewed publications and presentations at national and international scientific conferences.

Thesis Structure and Volume. The dissertation includes an abstract in Romanian and English, lists of tables, figures and abbreviations, an introduction, three chapters, general conclusions and recommendations, a bibliography of ____ references, and appendices. The main text comprises ____ pages.

Keywords: music, teaching, integration, primary school teachers, attitudes, methods, elementary school, primary education, pedagogical model, methodological programme.

CONTENT OF THE THESIS

The Introduction outlines the relevance and importance of the research problem, together with the study's aim, objectives, originality, and significance. It also includes the theoretical and practical significance of the research, the main findings of the investigation, and a summary of the thesis chapters.

Chapter I. Theoretical Foundations of the Integration of Musical Activities presents the theoretical approaches and epistemological aspects of integrating musical activities into teaching. It defines the theoretical concepts underlying the integration of the arts in education and examines the origins of arts integration in general.

The second part of chapter 1 treats the pedagogic and psychological dimensions of music integration in the teaching of other disciplines, the effects of music integration on the brain, concentration, development, discipline and class management, behavioral problems, motivation, productivity and performance, the benefits of teachers, who incorporate music into their curricula. At the same time, the effects of music on feelings, anxiety and stress problems are presented, as well as the effects of music on learning skills.

The third part of chapter 1 deals with the correlation between music and elementary school disciplines in Arab schools (language; foreign languages, Math, Science, and Religion). A special emphasis is placed on Islam because the religion in the researched schools was Islam.

In **Chapter 2, Development of the Pedagogical Model for the use of musical activities in the educational process of primary education**, is represented. This chapter presents the basic curriculum of music education and sets out the national standards for music education. The next part of this chapter presents the process of developing methods and techniques for integrating music in the teaching of school subjects in primary school. In this context, the attitude and effectiveness of teachers in terms of integrating music in the teaching of other disciplines is diagnosed.

This chapter focuses on the development of a pedagogical model for integrating musical activities into the educational process at the primary school level. Based on relevant theoretical foundations and identified practical needs, a pedagogical model was developed to facilitate the effective integration of music into teaching and learning activities.

The chapter presents the principles, objectives, factors, and conditions underlying the implementation of the proposed model. Furthermore, the developed pedagogical model provides the foundation for designing a program for the integration of musical activities, aligned with national standards for music education. The program is designed to support the systematic use of music across school subjects and educational activities, thereby contributing to the harmonious development of students.

CHAPTER 3, *Methodological perspectives of music integration in the didactic of other disciplines* is divided into three parts. The first part presents the effectiveness of music integration and attitudes of teachers towards music integration. This chapter consists of the methodology of research and verification of the experiment. Then the second part deals with the formative value of the pedagogical model of music integration in the didactic of other disciplines and research findings before and after applying the pedagogical model and with or without musical experience of the teachers. The last part presents the discussion of each thesis, and the conclusions and recommendations of the research. General conclusions and recommendations present the synthesis of the results of our research, as well as the recommendations for the activities in the systemic field of further research.

1. THEORETICAL FOUNDATIONS OF THE INTEGRATION OF MUSICAL ACTIVITIES

1.1 Theoretical concepts and attitudes on the integration of arts in teaching

The achievements attained by individuals through the learning process represent the collective experience accumulated in the field of education and constitute an integral part of global social culture.

From the perspective of the sociology of education, global social culture encompasses a body of fundamental knowledge and skills necessary for developing individuals who are capable of adapting to diverse situations, who are responsible toward an ever-evolving society as well as toward themselves, and who are competent participants in social life [57, p. 71].

Originally derived from mathematics, the concept of **integration** has come to be widely used across various fields of the social sciences and humanities, including economics, where it encompasses a broad range of processes and phenomena.

In its general sense, **integration** refers to the reciprocal adjustment of the constituent elements of a system, enabling the system to establish a new equilibrium, or to the combination of parts into a whole in the process of achieving unity. Unity, in turn, is understood as a whole resulting from the combination of several parts or entities. In economics, the term *integration* refers to the relationships established among different departments within a company or among different firms participating in a technological production chain to produce a final product. The concept originates from the Latin *integro*, *integrare*, and *integratio*, meaning *to bring together, to unite several parts into a coherent whole, to restore, or to make complete*. In this context, the constituent parts become integral components of the whole.

According to the *Concise Oxford Dictionary* and the *Chambers Essential Dictionary*, **integration** is the combination of parts into a whole, while **union** is the whole resulting from the combination of separate parts or members. Thus, integration is the process of attaining the state of union. The *Larousse Dictionnaire* defines integration as entry into a subsystem, whereas the *Dictionnaire des Sciences Économiques* emphasizes that integration generally refers either to the incorporation of an external element into an existing system or to the transition from a diffuse state to a coherent one. In every case, the concept of integration inherently includes the notion of unity—that which is dispersed becomes united. Similarly, the *Dictionnaire Économique et Financier* considers integration as an aspect of concentration, a narrower interpretation that no longer reflects contemporary approaches [94].

T. Callo [12, p. 10] approaches the issue of **integrality** in pedagogy as a consequence of revitalizing the formative ideal of education. From philosophical, logical, and pedagogical perspectives, the researcher identifies the criteria of integrality (conditions of possibility, relational

foundations, etc.), the factors of integrality (the integrating environment, the integrating and integrative systems, etc.), and the characteristics of integrality (its processual and instrumental nature, among others).

The concept of **integrality** entered pedagogy as a response to the fact that educational practice presents a wide variety of problems and situations that exceed the explanatory capacity of a single discipline, as well as to the revitalization of the formative ideal in education. Furthermore, drawing on the relational theory of postmodernism, it should be noted that this perspective shifts the focus away from substance in favor of relationships. Consequently, the understanding of cause-and-effect mechanisms is reconsidered in favor of identifying the conditions that make a process or phenomenon possible within the network of relationships it establishes in a particular time and space. According to L. Ciolan, this perspective seeks to identify the “relations of forces” that are continuously articulated and rearticulated, giving rise to cognitive, organizational, and social structures [17, p. 18].

The **methodology of knowledge integration** is the instrument that ensures the effectiveness of the integration process. Knowledge integration involves several interrelated processes: the systematization of previously acquired knowledge; the acquisition of new knowledge and its integration with existing knowledge; and the planning of the subsequent process of knowledge acquisition. In this way, the methodology has a **triadic** character, as it encompasses three components of the process of knowing: what is known, the knower, and knowledge itself. Consequently, the methodological instrument of cognition must reconcile these three components in order to ensure the integrity of knowledge. The elementary instrument of cognition, referred to as a **system** (or **model**), incorporates this trichotomy in the form of three fundamental principles corresponding to its three elements. These guiding principles are:

- **Wholeness** (*Totality*)—the fundamental concept underlying the world of objective knowledge, which serves as the formative basis for every outcome of cognition. This principle gives rise to a characteristic systemic property that belongs exclusively to the system as a whole rather than to its individual components. This property is known as **emergence**, emphasizing that the characteristics of the system as a whole cannot be reduced to the characteristics of its constituent parts.
- **Causality**—the central principle governing the world of objects and phenomena, expressing the universal interconnectedness of reality. The complete absence of causal relationships anywhere in the universe would undermine the principle of wholeness. The principle of causality implies the existence within every system of a so-called **system-forming factor**, namely a complex of causes that ensures the integrity of the system and prevents it from disintegrating into separate parts.

- **The (relative) knowability of the world**—the central principle concerning the knowing subject, without which the very process of cognition would lose its meaning. Knowability assumes a specific form expressed through the property of **modelling**. Modelling implies that a particular characteristic of one system may correspond to a characteristic of another system; thus, a model represents a correspondence between two systems according to a particular criterion.

There are necessary conceptual connections between the concepts of **integrality** and **wholeness (totality)**, as both refer to an absolute whole. Likewise, there are **critical connections** between the concepts of **integrality** and **unity**, where a criterion is understood as any relevant factor contributing to the meaning of a concept without necessarily constituting an essential condition [103]. Such connections may or may not exist, as in the relationship between *union* and *cohesion*. Unlike **holism**, which maintains that the parts can be understood only through the whole to which they belong and that wholes (or at least some of them) are greater than the sum of their parts [9, p. 285], **integrality** does not attribute such an absolute status to the whole. Its constituent elements retain their independence and may be separated or disintegrated from the whole.

Thus, by synthesizing the defining characteristics of integrality within a hermeneutic framework, the following features may be identified:

- **Integrality** is both a phenomenon and, implicitly, a process.
- It is more than the sum of its parts, generating a synergistic effect that produces superior outcomes.
- It has no independent “personality”; it is not an object in itself but rather an instrument for achieving a particular purpose.
- It requires a rigorous and coherent order, bringing together multiple forms of rationality.
- It presupposes a strong connection with life, reality, and everyday experience.
- It is primarily oriented toward the development of values and attitudes by establishing relationships among different disciplines within students' cognitive structures.

At the same time, curricular integration at this level offers several advantages. It facilitates students' ability to establish connections among the content of different disciplines, contributes to a deeper understanding of issues that cannot be fully explained within the boundaries of a single subject, and encourages the development of coordinated instructional planning.

Integration in its true sense, characterized by the explicit presence of boundary-crossing processes, first occurs at the level of **interdisciplinarity**, which involves the intersection of different curricular areas. Interdisciplinarity emerged as a response to the fragmentation of the modern intellectual landscape, representing “a desperate defensive measure aimed at preserving the global character of the intellect” [15, p. 47].

Recognizing that the principal foundation of interdisciplinarity lies in the **transfer of methods** between disciplines, B. Nicolescu distinguishes three degrees of interdisciplinarity:

- **The applicative degree**, in which the transfer of methods leads to concrete practical applications.
- **The epistemological degree**, in which the adoption of methods from other fields within a particular discipline generates valuable reflections on its own epistemological foundations.
- **The disciplinary-generating degree**, in which the transfer of methods between two or more disciplines gives rise to the emergence of a new discipline [as cited in 15, p. 127].

Accordingly, **interdisciplinarity** may be defined as a system of relationships and interactions among the content of different disciplines within the teaching and learning process, with the ultimate aim of fostering the holistic development of the learner's personality.

At the curricular level, the highest degree of integration is represented by **transdisciplinarity**, which extends to the point of fusion. **Fusion** constitutes the most complex and most advanced stage of integration. Transdisciplinarity is the form of interaction and interpenetration among several school disciplines that, over time, leads to the emergence of a genuinely new field of knowledge. It encompasses what exists simultaneously **between disciplines, within disciplines, and beyond all school disciplines**. According to L. Ciolan, the space between and beyond disciplines that characterizes transdisciplinarity is rich in scientific information [17, p. 53].

The **mechanism of integration** involves the implementation of the following actions:

- **For previously acquired knowledge**, systematization is required in order to identify contradictions and gaps and to ensure that these deficiencies can be eliminated by drawing upon existing internal knowledge or future external knowledge. This process requires the repeated application of the procedures of analysis and synthesis. In principle, it is continuous, although in practice it is constrained by internal resources, the surrounding environment, and the level of self-awareness.
- **For the present stage of learning**, integration itself involves constructing a model of the external elements of knowledge and synthesizing them with the existing model of integrated knowledge. At this stage, challenges may arise, such as verifying the model of external elements to identify internal contradictions or inconsistencies and determining their correspondence with the elements already included in the model.

Within the framework of integrated education, several key components are emphasized:

- **The learner**, who is viewed not through the lens of deficiencies or failures but in terms of his or her potential, capacity to construct new knowledge, willingness to learn, active participation, and gradual development of autonomy. The learner is regarded not merely as

an intellectual being but as a person with a complex personality—including affective dimensions—and as an active subject of learning and a social being. An active learner engages in both physical and practical activities in the material world and intellectual, cognitive activities involving inquiry, investigation, rediscovery, and the construction of new knowledge. The highest level of learner activation occurs through personal, internal, and abstract reflection, at the level of higher-order thinking, abstraction, and verbal reasoning [67 L.S].

- **Curricular content**, which is no longer regarded as a collection of facts to be memorized and reproduced but rather as a means, vehicle, and context for students' cognitive, psychomotor, affective-attitudinal, and social development. It serves to support students in constructing and developing new knowledge independently, establishing intra- and interdisciplinary connections, adopting transdisciplinary approaches, transferring knowledge across contexts, applying learning in practical situations, preparing for action in diverse contexts, and fostering both educational and interpersonal relationships.
- **The teacher**, whose professional identity undergoes a fundamental transformation. Rather than serving primarily as a transmitter of knowledge, the teacher becomes a designer and organizer of learning situations that create opportunities for dynamic interactions between students and the objects or content of learning. Instructional activities are carefully structured to enable the teacher to observe and analyze how students engage in the learning process.
- **Peers**, who constitute another important practical dimension of interactive learning. Their role becomes increasingly significant as the teacher's direct instructional role gradually diminishes, making room for students' active participation and for intellectual, verbal, social-emotional, and affective interactions among classmates. These interactions facilitate meaningful discussion and promote the advancement of knowledge by encouraging students to exchange and critically examine their own ideas, concepts, opinions, perspectives, and arguments.

During the 1990s, interest in educational integration appears to have experienced a renewed growth [106]. Supporters of combining the arts with academic subjects represent a broad range of viewpoints, interests, and objectives. Arts educators generally aim to strengthen the position of the arts within the academic curriculum through integration [126]. They envisage cooperation between arts specialists and classroom teachers, thereby reinforcing the relationship between these often-marginalized specialists and educational institutions. For school principals, integration usually means that classroom teachers incorporate arts instruction into the regular academic curriculum. They often regard this approach as an effective way to make better use of instructional time while reducing the expenditure of financial and material resources. Classroom teachers, however,

frequently have mixed feelings about integration: they may perceive the inclusion of the arts as an additional compulsory curriculum requirement imposed without adequate support. Nevertheless, many teachers also recognize the importance of offering learning opportunities that enable students who are less academically oriented to develop and demonstrate their individual strengths and talents. [80]

The discrimination of human knowledge into four types also demonstrates that the first two types of knowledge, empirical and mythic-religious, are concomitant with the beginning of active human knowledge, of knowing things and beings through their transformation-construction-creation [apud.31]. The reception of beauty in nature and the first artistic-aesthetic creations of humans anticipated the scientific knowledge of these, so the action of aestheticizing/conceptualizing art is later than the actual action of artistic-aesthetic construction-creation. As two consecutive actions/events occur, they simultaneously create the historical dimension of one's existence. However, aestheticizing-conceptualizing art is a historical process of creating scientific values regarding art and literature.

In educational terms, the aestheticization of art led to the establishment of the pedagogy of art, whose defining principle, according to Vl. Pâslaru, is the correspondence between the origin of art didactics and the origin of artistic knowledge [apud.31].

The need to create beauty and to live in a beautiful environment was affirmed in prehistory through the process of making objects (tools, utensils, living spaces, etc.) of practical utility. However, the natural environment of human existence constantly required the adaptation of the action of shaping these objects to the natural conditions (light, temperature, humidity, wind, etc.), which in itself represents an action of harmonizing human actions with nature, harmony being the first principle of beauty. Thus, humans began to build objects that combined utility with beauty – a phenomenon defined by Plato as the principle of the useful and the beautiful, the pleasant [apud.31], represented in forms, colors, ornaments, decorations.

Since Antiquity, philosophers have attributed fundamental importance to music. Pythagoras spoke of the "music of the spheres," viewing the universe as a system of harmonious vibrations. Plato and Aristotle emphasized the educational and moral value of music, arguing that it shapes the soul, cultivates sensitivity, and guides individuals toward harmony and inner balance [40].

With the actions of harmonizing practical activity (subjectivity) with the phenomena of objective existence (objectivity), aesthetic taste also appeared and developed – the first manifestation of the artistic attitude of humans.

But the most important transformation that the human underwent as a result of creating beauty was the realization that the beauty created by him is not only external but also internal. Humans recognized the relationship between beauty, on one hand, and sensitivity and wisdom, on

the other.

The harmonization of this relationship represents the beginning of artistic and aesthetic culture, the first type of culture that defined humans as humans – as creative beings in relation to the existential environment and to themselves. Human behavior, initially motivated solely by physiological needs, transformed into behavior that fundamentally transcended physiological existence – into aesthetic behavior.

It was this aesthetic behavior that led humans to explore what they created in the realm of beauty, thus conducting an aesthetic research of their artistic products.

Thus, with the research of works of art and artistic phenomena, science and philosophy of art – aesthetics – were also established, operating with a system of specific terms.

Dictionaries explain aesthetics as a philosophical discipline, which constitutes the theoretical and methodological foundation of the theory of each art, the history of art, and art criticism [1].

The philosopher Immanuel Kant (1724-1804) made the defining point in the definition of aesthetics and its object in his renowned work *Critique of Judgment* [35], published in 1790.

Kant reflected on the nature and essence of aesthetics, on aesthetic categories and the artistic message. Thanks to Kant, aesthetics as a philosophical branch presents itself as a theory of perception, taste judgment, aesthetic attitude, and the sublime: artistic beauty is an autonomous value because aesthetic emotion arises when it produces a perfect harmony between our plastic imagination and the patterns of our intelligence [35, p. 256].

A significant aspect of Kant's concept of beauty is its association with the supersensible and metaphysical: although the creation-reception of a work of art has the sensory as its first step of knowledge, it is not a physiological reaction to material stimuli, but an internal, supersensible experience, provoked by the imagination.

Indeed, when reading a literary text, we do not see the landscapes described with our eyes, and when listening to a musical creation, we do not perceive it with our ears, but with our imagination and thinking in images. We do not see and hear, but we create visual and auditory images that, in turn, create our second existence, the supersensible (metaphysical) one.

Romanian aesthetic thought during the nineteenth and twentieth centuries, particularly in the latter part of the twentieth century, underwent important transformations. These included the establishment of aesthetics as an autonomous scientific discipline and the development of original ideas and scholarly contributions in several areas, including the formulation of a systemic philosophy, the expansion of research in axiology, and the enrichment of theoretical knowledge concerning artistic and aesthetic phenomena. These developments were significantly influenced by the works of philosopher-aestheticians such as T. Vianu, S. Bârnuțiu, T. Maiorescu, C. Leonardescu, C. Dumitrescu, L. Rusu, L. Blaga, M. Dragomirescu, E. Lovinescu, G. Ibrăileanu,

and other scholars. [apud. 31]

There are also authors of true aesthetic treatises, recognized nationally and universally, and resistant over decades, such as T. Vianu, L. Blaga, and G. Călinescu.[apud. 31]

T. Vianu's aesthetics, for example, is oriented towards ensuring aesthetic value through the elaboration of a systematization of moral, religious, aesthetic, etc. values characteristic of certain age periods, starting from the early years of life and continuing through all other stages of ontogenesis. Such a systematization has a direct applicative output for the formation of values in the early years of schooling. Another concept related to our research, developed by T. Vianu, is expressed by the formula 'aesthetic phenomenality and artistic depth.[apud. 31]

According to the Romanian Encyclopedic Dictionary, in the process of labor, humans have developed the ability to create 'according to the laws of beauty,' to give objects a harmonious form—a concept debatable today. Although its opponents generally agree with it, they consider it limiting because, they argue, beauty penetrates the entire human being, not just their labor activity, so its origin must be sought in everything that forms the human being.[apud. 31]

These cultural forms use specific languages, synthesized by the notion of artistic (poetic) language, expressed by the dichotomies of beautiful-ugly, lyrical-tragic, comic-dramatic, etc.; by the elements of poetic form – motif, phrase, sentence, part, episode; intonation, composition (with its elements of balance, symmetry, circularity, etc.).

Currently, the humanities and the arts (history, music, literature, etc.), as objects of learning, are treated as distinct parts, and this has its reasons, as the development of knowledge also requires deepening in details. However, the great thinkers of antiquity taught us that 'the muses are sisters' and that we must perceive the system of sciences and arts as a whole, which complements and interacts with each other, and this thesis is true and just as relevant today. Several notable authors have expressed their views regarding the way in which actions of creation, reception, and interpretation of artistic creations unfold:

The Artistic: T. Vianu (1897-1964): 'It is reasonable to consider only artistic beauty as the unique object of aesthetics'; I. Gagim, 2004: Sound art is implicitly also an educational discipline.

The Aesthetic: L. Blaga: expression of an original aesthetics and philosophy, heightened by the thirst for the transcendent, imbued with Romanian mythology [Ibidem, p. 18]; G. Călinescu develops a system of Principles of Aesthetics (1968); E. Cioran developed a profound human philosophy, fully educational (The Twilight of Thoughts, 1991; Revelations of Pain, 1990) [Ibidem, p. 18].

The approach to **the aesthetic and artistic in art** forces us to emphasize the specificity of the work of art, which lies in the fact that the artistic subject, through its ability to emotionally-creatively influence the subject-receptor, transcends the logic of knowledge through notions,

terms, etc., distancing the receptor from the living art of sensitizing and reflecting on what is read (in literary activity) or on the musical creations heard (in music). In this context, the formation of students' ability to adequately receive the artistic work (literary, musical, etc.) deserves to be elevated to a level of educational prestige that it rightfully deserves because of its implicit value.

It can thus be observed that the ideas of Romanian philosophers, aestheticians, and art critics from the past and present remain relevant and beneficial to strengthening the scientific positions of art pedagogy.

Generalizing the philosophical, psychological, and pedagogical concepts examined above, we find out that all authors also express the idea of integrating artistic fields, which should lead to the formation of a complete artistic-aesthetic personality, thus requiring a new didactic approach to the teaching-learning-evaluation of the arts in formal education, and beyond. However, until about the middle of the 20th century, didactics, considered (depending on the situation) a scientific discipline and an art of teaching, was predominantly focused on the content of school subjects, which led to it being a didactics of content, and according to Vl. Pâslaru, also didactics predominantly of the sciences, since, he mentions, even when referring to the arts, J.A. Comenius considered the learning of trades.[apud. 31].

Artistic and aesthetic education including the formation of primary school students in the elements of artistic-aesthetic culture, does not consist in the technologization of artistic instruction, as was traditionally done for centuries, but in the development of the receptivity-imagination-thinking-creation of the students, for only in this way today's children can gradually become homo aestheticus, that is, people who live artistically-aesthetically, thus creating their second existence, spiritual by definition – the metaphysical existence.

Alongside the phrase *aesthetic education*, the phrase *artistic education* has also been established, meaning the preparation of a person for art, for the artistic act. According to M. Breazu, artistic education is only a part of aesthetic education, its main part [6].

In conclusion: the concept of the interaction of art genres, on one hand, and the concept of integrating types of artistic education, on the other hand, is elaborated by numerous authors, from antiquity to the present.

However, most approaches represent only general or particular mentions, not epistemic ones, but they are valuable for developing an epistemological framework for the methodology of integrating various texts into music education.

Thus, the prolegomena for a didactics of art summarize the scientific values: the principle of the origin of the pedagogy of art in the principles of artistic-aesthetic knowledge, the law of universal connection, the universal character of interdisciplinarity, the syncretism and interaction of the arts – including literature and music, the deduction of educational methodologies for the arts

from the nature of the artistic work and the particularities of students' artistic reception, etc.

Starting from the age peculiarities of the young schoolboy, and from the classification criterion according to the students' age, we conceived the classification of musical knowledge considering the perspective of classical stages (I. Erikson, J. Piaget, I. Kohlberg, L. Vagotski, N. Vetlughina).

Thus, the stage of cognitive development is characterized by concrete operations of thinking and the beginning of formal operations. In small classes, some students may be able to work with abstractions, but most of them need generalizations based on concrete experiences. All elements of music in the teaching process can be called musical knowledge, this quality gives them a unitary character, which works to form attitudes in students. D. Hopkins and M. Ainsow point out that because changes in teaching are not maintained until they have an effect on students, we must recognize that special investment is made in staff development, not in improving student performance [26].

Bresler [80] notes that the academic literature primarily focuses on the cognitive dimension of integration, while also acknowledging its affective dimension. In educational contexts, the concept of integration may refer to several approaches, including:

- Infusion – incorporating a specific subject throughout the curriculum;
- Topics within disciplines – combining different components of the same subject within the instructional process;
- Interdisciplinary integration – preserving the conventional boundaries between subjects while relating the content and concepts of one discipline to those of another;
- Thematic approaches – organizing learning content around a central theme, thereby reducing the separation between disciplines;
- Holistic approaches – addressing the child's needs as a whole, including cognitive, physical, moral, emotional, and spiritual dimensions [161; 162];
- Multidisciplinary approaches – analyzing a particular situation from the perspective of several disciplines;
- Interdisciplinary approaches – examining a problem through different disciplinary perspectives and synthesizing them into a broader explanation;
- Metadisciplinary approaches – comparing the methods and practices specific to a particular discipline;
- Transdisciplinary approaches – investigating how a concept is expressed in both political and physical discourse [97].

Across different subject areas, the central purpose of this framework is to help students develop critical and creative thinking by establishing connections between disciplines [122].

Integration may also be distinguished as either content-oriented or skill-oriented. Content-oriented integration is thematic and seeks to help students acquire advanced subject knowledge, whereas

skill-oriented integration is procedural and aims to develop general skills and strategies that can be applied to interpret situations and solve problems in various contexts [80; 145].

The origins of curricular integration can be linked to the principles of progressive education at the beginning of the twentieth century. Progressive educators promoted child-centered curricula and holistic learning, thereby encouraging connections between different school subjects [80]. The concept regained prominence during the 1960s and 1970s, when educators began to focus less on academic achievement alone and more on students' learning experiences. Rather than viewing the curriculum as a fixed and predetermined structure, they emphasized its meaning and relevance for learners. As a result, the arts and artistic forms of thinking acquired a more legitimate and desirable place in education. This period of innovation and experimentation with new educational objectives, content, and teaching methods encouraged the integration of the arts with academic disciplines [80; 78].

Elliot Eisner [apud. 85] advocates sensory education and the removal of the strict division between cognitive and affective-emotional development [87; 80]. The arts illustrate particularly well the close relationship between cognition and affect. Various forms of representation, such as visual, kinesthetic, and auditory modes, strengthen learners' ability to engage with and understand the surrounding world while also enabling them to derive multiple meanings from it. Expanding these forms of representation beyond verbal and numerical systems can substantially enrich people's perception of reality [87; 80].

The perception / reception of music is considered the basis and essence of musical activity. In his research, Ion Gagim established and characterized three general levels of musical perception:

(a) philosophical: music acts on the elementary senses - pleasure-disgust, excitement-silence;

(b) psychological: the artistic message is perceived, the sound is transferred to the psychological, the external movement becomes internal (imagistic); (imagination is indispensable to the human individual, facilitating the act through giving meaning and logical significance to experiences, making possible not only living but also reliving events);

(c) spiritual: music communicates with the whole subject, the energy of music tending to be externalized in actions, the perception and knowledge of music [93].

Initiatives developed by arts organizations were subsequently transformed into curricular projects and educational materials. For example, projects such as RITA (Reading Improvement through the Arts) and ABC (Arts in the Basic Curriculum) promoted the teaching and learning of core subjects through artistic activities [80].

1.2 Pedagogic and Psychological dimensions of music integration in the didactic of other disciplines

According to researcher Ion Gagim, music represents a profound form of knowledge and self-understanding. Certain phenomena and meanings can be perceived only through particular senses and emotional states, and music can evoke precisely these forms of experience. Gagim also describes music as a religans, or a means of reconnection, because it re-establishes the individual's relationship with the Absolute. Referring to Leibniz's well-known description of music as an unconscious arithmetic activity of the soul, he highlights its irrational dimension and suggests that musical perception leads to a unique and mysterious form of knowledge. This may be understood as a "knowledge of the heart" (*raison du coeur*), governed by its own particular logic. Knowledge acquired through music is therefore distinctive, as it involves entering into the object of knowledge through identification and unity with it [29].

Although music is frequently underestimated, it has numerous documented benefits and important connections with the body, the brain, and the learning process, all of which can contribute to students' academic achievement [133].

A significant part of the literature on music integration consists of accounts of successful practice, most often provided by teachers describing their own classroom experiences [133; 114]. Other studies have examined the influence of integrating music on students' learning of academic subjects [133]. Research has established a connection between music and brain activity, indicating that both cerebral hemispheres are engaged during musical experiences. In addition, different types of music may affect the brain in different ways.

A study conducted by Susan Hallam and John Price showed that particular frequencies and combinations of sounds activate specific areas of the brain, triggering biochemical changes that may produce calming effects in students [49; 133; 102].

The Benefits of Teachers Incorporating Music in their Curricula:

McCullar [131], says that classroom teachers spend a lot of time with their pupils and thus they are responsible for contributing to their total development including opportunities for aesthetic development as a way to support a pupil's "sensitivity to the expressive qualities found in an artistic experience" [131, p. 1]. The fine arts offer this expressive opportunity for all students and should be accessible for students in daily classroom situations [74].

Music, particularly song, fulfills several essential functions. First, it has a **communicative function** as a universal means of expression, conveying feelings, thoughts, and inner states, often more effectively than spoken language. From lullabies and wedding songs to funeral laments, singing has always served as a means of expressing collective emotions. Second, it performs an **aesthetic and expressive function**. By combining melody and poetry, song becomes a complex

artistic creation. M. Stoica [60] defines it as "a creation born from the perfect combination of music and poetry," while R. Ciurea [18] emphasizes the organic unity between text and melody. Third, song has a **formative and educational function**. In Ancient Greece, singing was used as an educational tool, with children learning to sing before acquiring literacy or numeracy because music was regarded as a pedagogy of the soul [39]. Today, singing continues to develop musical hearing, memory, creativity, and emotional expression. Finally, song fulfills a **spiritual function**, closely associated with the sacred and the religious dimension of human life. Folk traditions and biblical texts have consistently used singing as a form of prayer and communion. Saint Augustine summarized this role in his famous statement: *Qui cantat, bis orat* ("He who sings prays twice") [4].

A holistic approach to education is provided when highlighting the learning of music and its significance and the interrelationship with other core subjects as part of an integrated program. This integrated approach to learning and teaching creates an environment that helps pupils understand the relationships between content areas.

As L. Ciolan observes, **holism** is a theory that emphasizes the structural and/or functional relationships between the parts and the whole, abandoning the exclusive focus on the separate elements of a system. It should be noted that the holistic approach involves reconstruction "from the bottom up," seeking to capitalize on the information that is lost when the whole is broken down into its component parts—a procedure characteristic of reductionism. Holism signifies "the irreducibility of the whole to its constituent parts, the superiority (not necessarily quantitative) of the whole over the sum of its parts, and an integral and integrated vision of the objects, phenomena, or processes under study" [17, p. 117].

According to P. Hash, **integrality** is a complex whole composed of elementary units connected through a network of relationships that create cohesion and are linked to the primary operation of the human mind, functioning as a model of knowledge [129].

When discussing the stages of integration, it is natural that the boundaries between them remain fluid and permeable. Integration is a dynamic process that can easily move from one level to another, progressing along the continuum. According to L. Ciolan [17, p. 135], the analytical rationale underlying the holistic approach is based on: (1) dividing the whole into its component parts; (2) analyzing and explaining these parts independently; and (3) juxtaposing the partial explanations in order to construct an overall picture of the whole.

According to researchers V. Chiș and M. Ionescu, the most advanced stage of integration is **transdisciplinarity**—the interpenetration and fusion of several disciplines through curricular integration. As V. Chiș states, transdisciplinary integration "fully represents a holistic, comprehensive curricular approach" [16, p. 22].

The development of a **didactics of the arts**, of which teaching methods constitute an essential component, has also been influenced by various theories of knowledge developed in philosophy, psychology, musicology, as well as theories of learning developed in psychology, pedagogy, and arts education, including:

- **In general philosophy, the philosophy of art, and the philosophy of music:** Kant’s triadic classification of cognitive philosophical categories [48]; Hegel’s triadic philosophical concept (syncretism–analysis–synthesis) [45]; and the distinction between scientific knowledge and artistic knowledge discussed by M. Breazul [7] and I. Gagim [38].
- **In general psychology and the psychology of music:** the theory of musical aptitudes; T. Bularga’s psycho-energetic theory of music [9]; V. Vasile’s theory of the dynamic nature of harmony [64]; I. Gagim’s two-phase theory of musical cognition—“perception and apperception” of the musical message [33]; I. Gagim’s proto-psychological concept of music and musical-type cognition [34]; and I. Gagim’s concept of extensive musical knowledge [35].
- **In musicology:** V. Vasile’s algorithmic theory of sound and consciousness [64]; G. Breazul’s functional theory of music [8]; I. Gagim’s intonational theory of music [36]; and I. Gagim’s concept of the musical message as a dynamic structure organized according to a hierarchy [38].
- **In general pedagogy and arts pedagogy:** M. Zlate’s concept of operative cognitivism [68]; and I. Gagim’s concept of music education [32].

Within an integrated approach to music teaching and learning, Ion Gagim explains the epistemic and pedagogical process of assimilating and perceiving a musical message through three dimensions of musical form:

- (a) form as theory, referring to structure, construction, or scheme;
- (b) form as sound; and
- (c) form as a psychological and affective experience [177].

This concept is largely consistent with the broader principle that an artwork is understood through the interpretation of its formal artistic elements, an idea developed by numerous aestheticians, philosophers, and art educators, including Aristotle, Immanuel Kant, Friedrich Schiller, G. Hegel, Wilhelm von Humboldt, and Martin Heidegger. Teachers who support an integrated curricular approach allow students to make connections with other subject areas because they “emphasize connection making performances within and across subject-matter knowledge and these performances both build and show understanding, therefore bringing insight home to the classroom” [145, p. 8].

One of the most popular effects of music on brain is called “Mozart Effect”:

“One of the most influential elements in relation to integrating music with other academic subjects was a very small-scale study by Rauscher, Shaw, and Ky [149;150] which was published 10 years after Gardner [95; 96], first published *Frames of Mind*. This study found that undergraduate students’ average spatial-reasoning IQ scores increased after just 10 minutes of listening to Mozart’s Sonata for Two Pianos in D Major, K 448, prompting a popular frenzy over the notion that music makes you smarter or the so called “*Mozart Effect*” [74]. Researchers suggest that the music of Mozart has useful effects on the functions of the brain [133].

The idea of Mozart Effect provided a catalyst for heightened popular and professional interest in the role of music and other arts in increasing learning in other academic subjects. This paradigm shift from emphasis on the cultural advantages of arts education to emphasis on the cognitive and academic impact is reflected in Jensen’s [117] *Teaching with the Brain in Mind* [74].

While the preceding research focuses primarily on adults, Wanda Routier examines the concept of the “Mozart Effect for Children.” According to Routier [156], exposure to Mozart’s music may influence brain activity and, consequently, support the learning process. These findings are significant for teachers, as they may encourage them to incorporate music into their instruction and reconsider their attitudes toward musical integration and its potential contribution to improving the quality of learning. Musical vibrations, structured patterns, engaging rhythms, and subtle tonal variations interact with the mind and body in complex ways, producing changes in brain activity that cannot be achieved through one-dimensional rote learning alone [B, p. 1; 156].

The central assumption of the “Mozart Effect for Children” is that Mozart’s music can enhance children’s spatial awareness and intellectual development [B, p. 1; 156]. Regular exposure to this type of music is also associated with the development of speech, concentration, reading, and language skills. In addition, students who sing or play a musical instrument may achieve better academic results [B; 133]. Frequent listening to or performance of music can further contribute to the development of memory. The concept also suggests a relationship between musical engagement and the development of mathematical abilities [B; 133; 152].

Evidence that music affects the body and learning suggests that music should be included in classrooms. “Music can be included in any classroom, regardless of grade level or subject matter” [B, p. 1]. Music has a great impact on learners. It can be very useful to pupils and help them receive higher achievements [133].

Integrating music into teaching - The idea of integration gradually extended beyond the academic environment and spread among practitioners and organizations in the field of the arts. Its origins can be associated with the period of progressive education, when the yearbooks of the Music Educators National Conference (MENC) published titles such as *Projects in the*

Interrelation of Music and Other High School Subjects and Fusion of Music with Academic Subjects in 1933 and 1935 [79]. Charles Duncan emphasized the importance of adopting a balanced approach to the relationship between the arts and other school subjects [79]. It is interesting to note that similar ideas re-emerged during the 1990s, a period when the arts were increasingly regarded as being under threat. In the 1993 MENC bulletin, entitled *A Vision for Arts Education in the 21st Century*, integration was presented as a means of enriching learning across other disciplines. The document emphasized that music could be taught through an interdisciplinary approach, as part of a broader curriculum, and that it could make a significant contribution to the teaching of other subjects [106].

Although numerous researchers and teachers support the integration of music, the practical implementation of integrative programs has received relatively limited attention. Descriptions of educational practices indicate that music remains insufficiently integrated into the instructional and educational process.

Numerous studies have focused on examining the influence of music on classroom management and the maintenance of discipline. Classroom management can be understood as the totality of actions undertaken by the teacher to organize students, the learning environment, time, and instructional materials so that teaching and learning can take place effectively [B, p.1; 115; 133]. Effective classroom management is essential for the successful delivery of lessons. Since maintaining discipline and organizing instructional activities can be challenging tasks, teachers often express concern about developing and improving this professional competence [133].

Teachers may place greater emphasis on organizing the classroom effectively and maintaining order than on presenting their subject matter in an engaging manner. Discipline remains a central concern throughout the teaching process because it influences every aspect of learning [115]. In this context, music may help sustain students' motivation and reduce discipline-related problems during lessons [133].

In this formula, the role of the teacher is not limited to teaching in the sense of presenting information; it also consists in organizing the educational environment, and in guiding the students' activity, in coordinating the use of available resources, in evaluating and recording the results. The teacher aims both to increase the volume of knowledge and to strengthen skills and abilities, to enrich the emotional sphere, to cultivate students' interest in the discipline studied and to involve them in various instructive-educational activities [24].

Literature talks about the effect of using music during the teaching process in order to reduce behavior problems [B]. In the study of Hallam and Price [102], they observed a lesson while using background music and a lesson in the same classroom without using background music in the lesson [B, 101].

As anticipated, the findings indicated that students were most productive when background music was playing [132]. Before its introduction, disruptive behaviors such as tantrums, crying, verbal and physical aggression, and excessive activity were frequently observed. Once the music began, however, the students became noticeably calmer and more cooperative [B, p1]. Music also produced physiological changes, including variations in blood pressure, body temperature, breathing, and pulse rate [101]. These bodily responses appeared to contribute to a calmer emotional state among the students. Nevertheless, the effects of music extended beyond its physiological influence.

The relaxing effect of music can positively influence students' learning experiences during lessons [133]. To ensure effective classroom management, teachers should create an environment characterized by low levels of anxiety and stress [B]. Music can help reduce tension, regulate stress, and influence the general mood of the class. Different types of music may generate different emotional responses. Hallam and Price found that music can influence students along a continuum ranging from stimulation and challenge to relaxation and calmness [101; 102].

The influence of background music was also reflected in students' academic performance. Its use was associated with increased cooperation, improved reading comprehension, and the general development of learning skills. Background music appeared to support progress among all students and did not produce negative effects on their performance [133].

Hallam and Price [102] reported that music can improve concentration and academic performance, particularly because students who are easily distracted often seek continuous stimulation [102]. Background music may provide the necessary stimulus and help them remain focused on their tasks. Their findings also indicated that instrumental music was more effective than music accompanied by vocals, which could distract students by providing excessive stimulation. Although various strategies can contribute to effective classroom management, the inclusion of music in classroom activities and lessons is one useful way to increase students' attention. Music can also help teachers stimulate learners' motivation. Despite being frequently overlooked because of financial limitations, it can support the creation of a positive and productive classroom environment [133].

Including music in lessons can enrich the subject matter and give the learning experience greater meaning. When students are more interested and actively involved, they tend to maintain their attention for longer periods and retain more information. Their engagement may also reduce discipline-related difficulties, as focused learners are less likely to engage in disruptive behavior. Mary Jackson and Donna Joyce suggest that music can contribute to positive classroom management by making the school day more engaging and stimulating, thereby increasing

students' motivation to learn and reducing discipline problems [115]. Music can therefore assist teachers in managing the classroom and creating conditions that support high-quality learning, improved academic achievement, and the development of stronger learning skills [133].

Currently in the Republic of Moldova the main aspects of music education, beginning with teachers' initial and continuous professional training and ending with the methodology of music education classes, are conceptualized, theorized and methodologized, being implemented, more or less, in all types of musical and musical-pedagogical institutions.

This situation, which can certainly be appreciated as a performance in the field, has advanced concerns for musical training and education to a broad and complex research area - the artistic-aesthetic culture of students, the perpetual formation-development of which is directly linked to the stabilization-elaboration of specific methodologies for the interaction of the first educational domains accessible to students and being the most present in their artistic-aesthetic consciousness and activity.

Before presenting the epistemes and methodologies already developed for musical training and education, a fundamental clarification is required: musical training in school does not have an autonomous purpose, but it is subsumed under general musical education, that is, the formation of an elevated music listener.

In the case of music, we can only use the term *methodology of musical education*, which implicitly includes musical instruction, which appears distinct in the case of teaching-learning information about music, whose transformation into musical knowledge, according to Vl. Pâslaru, M. Tetelea, V. Crișciuc, M. Morari [apud. 31], is already an act of musical education.

Ion Gagim is a leader in the field of conceptualizing music education in Moldova. His theory includes an original system of principles, objectives, content, and methodologies for music education.

It is no coincidence that in the 20th century, until the 1980s, the school subject based on musical art was called *Cântul (Singing)*, and its lessons predominantly featured vocal-choral singing activities. Singing remains the main activity for students today, as it synthesizes listening-hearing with speaking. The ability to sing correctly develops in students a high interpretive culture, which manifests in the vivid experience of music (speech + feeling), in understanding and performing it as a living art – music exists truly for students during singing and the state of singing; it is the most accessible form of art. By listening to the performance of songs by other students (classmates, schoolmates, from other schools and towns, etc.), students realize the accessible and widely circulated nature of music.

Every song is first and foremost a melody, and the melody is the most important form of musical expressiveness. Therefore, in vocal interpretation, it is strictly necessary to respect the

rules of singing, such as: *correct body posture, breathing, precise intonation of pitch, clear diction, and correct articulation to achieve a beautiful cantilena – the decisive factor in conveying the message of vocal creations.*

Also, the role of intonation in speech as well as in singing, the role of diction and articulation, is well known. Cultivating students' skills to sing and listen, forming correct habits of breathing, diction, emission, with physiological effects related to pulse, blood pressure, metabolism, and a state of well-being and spiritual balance, requires intense and continuous intellectual effort.

If we compare music with other arts, we observe a profound similarity, especially with literature: both are temporal and auditory arts [153, p. 57].

Therefore, musical discourse in performance constitutes an act of communication similar to spoken language, following certain principles and syntactic laws that concern the construction of phrases, appropriate breathing (punctuation), and their clear expression. Adhering to phrasing principles ensures the interpretative act clarity, transparency, and logic. Students must perceive the elements of musical syntax based on listening and interpretation. It is important for students to understand that in music, just like in coherent speech, there is punctuation that divides the melody into motifs, phrases, sentences, periods, etc.

Traditional approaches to teaching and learning music in schools prioritize methodologies specific to the teaching of sciences and are not epistemologically argued; the Moscow school approaches to music didactics and their development by researchers from Moldova identify-explore-foundate specific principles and methodologies of artistic-esthetic knowledge, thus contributing to the establishment of music didactics.

The teaching of music is epistemically based on the unity of musical education-instruction, the distinction between the two activities being purely theoretical or insignificant in terms of examining them separately – even in the formation of predominant musical knowledge, the actions with an educational character prevail, as the state of singing and recreating musical images are, by definition, attitudinal activities; it relies on the syncretism of literature and music; the principles and methodologies of music didactics offer praxeological openings for the interaction of methodologies. This is relevant in the formation of the musical culture of primary school students.

The artistic-esthetic culture of the young schoolchild consists of objective esthetic culture (the inherent values of the appropriated works of art, their aesthetic values) and subjective esthetic culture (the values of the receiver – traits, behaviors, aptitudes). These two types of culture are formed and developed only in a continuous process of interaction.

The ideas, concepts, principles presented above, along with the entire system of notions, categories, and terms used in this section, theoretically validate the relevance of our research and the identified scientific issue, implicitly stating that artistic-esthetic knowledge, and consequently

artistic-esthetic education, require the establishment and application of specific methodologies for the formation of students' artistic-esthetic culture elements, whose interaction is suggested by the very principles of art and artistic-esthetic education.

The orientations of **interactive pedagogy**, the educational model it proposes, the way in which it conceptualizes the curricular process, and its educational implications differ fundamentally from the field of **classical/traditional pedagogy**. The main dimensions of the educational process will be examined through a multi-criteria pedagogical and comparative perspective, contrasting interactive pedagogy with classical pedagogy, in a condensed and operational form:

- **The systemic paradigm of education** (the whole is studied) rather than separate parts of the whole.
- **Psychosocial interactions and intellectual exchanges among students**, collaboration and cooperation, and the establishment of affective-social relationships rather than individualism and competition among learners.
- The classroom is viewed as **an educational community** (which also includes the teacher), where students learn in relation to and together with others, rather than as a group of students who learn merely alongside one another.
- Not only the teacher, but also students themselves can make decisions (including through **feedforward mechanisms**) in collaboration with the teacher, rather than the teacher being the sole person responsible for the learning process.
- **The student as an active participant in the educational process**, as an authentic (both object and) subject of education, as a genuine subject of the educational act, and as a conscious and active co-participant who engages fully in learning activities—intellectually/cognitively, psychomotorically, and affectively-volitionally (reflecting, engaging in dialogue, communicating intrapersonally and interpersonally, cooperating, searching, experimenting, testing, solving problems, analyzing, synthesizing, etc.). The student is placed at the center of the curricular process and at the center of the process of (re)constructing their own knowledge and understanding. The learner makes use of non-directive, dialogic, active, and interactive learning strategies. The student becomes fully involved in the learning situation, which leads to their transformation into their own manager of knowledge acquisition and personal development. Interactive approaches, strategies, methods, and techniques motivate students, unlike the traditional model in which the learner is a passive participant in the educational process, a passive receiver of ready-made knowledge, and an object of education who listens and learns through directive, expository, and demonstrative learning strategies.

- The **teacher as guide, coordinator, facilitator, organizer, collaborator, and tutor** for the student and for the learning activity, through the implementation of a constructivist curriculum. The teacher acts as a mediator and facilitator of the learning process undertaken by students rather than as a transmitter of knowledge to students or as the sole authority directing the learning process.
- It must be recognized that **teaching means organizing students' learning situations and learning experiences**, rather than simply presenting information, dictating content, and requiring students to verbally reproduce what was said during the next lesson.
- The teacher guides learning **indirectly, non-directively, and flexibly**; they act as a facilitator of learning (from both cognitive and metacognitive perspectives) and of knowledge construction. The process of mediation and guidance dynamically integrates pedagogical approaches at both individual and systemic levels, taking into account the specific characteristics of the classroom curricular environment and concrete educational situations, rather than relying on direct, directive, and rigid instruction. The teacher remains a leader in the learning and knowledge-construction process, but guidance is oriented toward the class group as a whole.
- **Active reception and construction of knowledge**, expressed through students' formulation of their own opinions and communication of these opinions to peers and teachers (active and interactive interpersonal communication, as well as intrapersonal communication), rather than through the passive transmission of processed knowledge and absolute truths by the teacher to the class group.
- Ensuring a balance between the **formative and informative dimensions of education** and aligning with the latest educational paradigms, including the need to shift the emphasis of instruction and education from the educator toward the learner, rather than focusing primarily on the informative dimension of learning and the transmission of ready-made knowledge.
- **Active, interactive, and creative involvement** of students in constructing new knowledge and learning acquisitions by using higher-order cognitive and creative processes, rather than passively receiving knowledge processed by the teacher and accepting absolute truths.
- Emphasis is placed on **the learning process experienced by students and the dominant ways of thinking required by the discipline**, rather than on the final product, namely learning outcomes and the accumulation of a certain volume of knowledge.
- Equal attention is given to **scientific, procedural, strategic, and declarative knowledge**, without privileging any single category, rather than emphasizing mainly scientific and declarative knowledge.

- Not merely **savoir** (knowledge), but rather **savoir-faire cognitif** (cognitive know-how), **savoir-faire pratique** (practical know-how), **savoir-être** (ways of being), and **savoir-devenir** (ways of becoming) are emphasized, rather than predominantly focusing on factual knowledge.
- **Active, interactive, and creative learning** through students' own intellectual and practical activity, involving cognitive/intellectual, affective-motivational, and psychomotor engagement, rather than passive learning through reception.
- Encouraging students' interaction with **other sources of knowledge**—for example, peers—while promoting cognitive and educational autonomy, rather than fostering students' dependence on the teacher as the sole source of knowledge. **All categories of students** are involved and assume responsibility through collective and cooperative activities, rather than only high-performing students being actively engaged.

From the perspective of pedagogical research and the philosophy of education, the integration of music with other disciplines is grounded in the premise that music contributes to the holistic development of the individual and facilitates connections among artistic, cognitive, and socio-affective dimensions of learning. The authors presented in the following table have addressed this issue from different yet complementary perspectives.

Table 1.1. Theoretical perspectives on the integration of music with other disciplines according to selected representative authors

Author	Perspective on the Integration of Music with Other Disciplines
Liora Bresler	She is one of the main advocates of integrated curriculum in arts education. She argues that music should be integrated with literature, history, sciences, mathematics, and everyday experiences in order to construct authentic learning. Integration develops critical thinking, creativity, and students' ability to assign meaning to knowledge. Bresler distinguishes different models of curricular integration (subordinated, co-equal, and authentic), advocating for integration based on common educational objectives rather than merely thematic associations.[102]
Immanuel Kant	In <i>Critique of the Power of Judgment</i> , music is considered one of the fine arts, having the role of cultivating aesthetic sensitivity and harmony between imagination and intellect. Although he does not explicitly discuss interdisciplinarity, his conception supports the integration of music with philosophy, moral education, and character formation through aesthetic education. [48]

Georg Wilhelm Friedrich Hegel	In <i>Lectures on Aesthetics</i> , music expresses the inner life of the spirit and occupies a place within a unified system of the arts. Music should be understood in relation to literature, religion, history, and philosophy, as all these fields express the development of the human spirit. Disciplinary integration facilitates the understanding of cultural phenomena as a whole. [45]
Lev S. Vygotsky	In his socio-cultural theory and in <i>Psychology of Art</i> , music is viewed as a tool for cognitive, emotional, and social development. Learning occurs through interaction and cultural mediation, which justifies integrating music with language and literature, theatre, moral education, and collaborative activities. Music stimulates imagination, language development, and symbolic thinking. [67]
Ion Gagim	He considers music a means of spiritual and cultural development of the personality. He supports the integration of music education with literature, visual arts, history, traditions, and moral education. Emphasis is placed on developing musical culture, aesthetic sensitivity, and cultural identity through interdisciplinary connections. [119]
Tatiana Bularga	She promotes integrated arts education and the exploration of connections among music, visual arts, dance, theatre, and other school subjects. Music is regarded as a universal language that simultaneously contributes to the development of students' cognitive, affective, and social competencies, as well as to the formation of key competences. [9]
Ioan Ciolan	He approaches interdisciplinarity as a fundamental principle of the modern curriculum. The integration of disciplines allows overcoming the fragmentation of knowledge and developing transferable competences. From this perspective, music becomes a learning context that can integrate content from language and communication, mathematics, history, civic education, and other fields, contributing to contextualized and meaningful learning. [17]
Phillip M. Hash	His research in general music education highlights the effectiveness of integrating music with other disciplines in primary and secondary education. He argues that interdisciplinary projects increase students' motivation, facilitate conceptual understanding, and develop competencies such as collaboration, communication, and creative problem-solving. Integration should respect the specific objectives of each discipline and avoid subordinating music to other fields. [128]
Stephen D. Krashen	Although he is primarily known for his theory of language acquisition, his ideas have implications for integrating music into foreign language learning. Music lowers the "affective filter," increases motivation, and facilitates the memorization of vocabulary, pronunciation, and linguistic structures. Songs provide comprehensible input and contribute to natural language acquisition through authentic and emotionally positive experiences. [140]

The perspectives of these scholars can be grouped into *four main directions*:

1. Philosophical foundation of integration (Kant, Hegel) [48,45]

Music contributes to the aesthetic, moral, and spiritual development of the individual and should be understood in relation to other domains of culture.

2. Psycho-pedagogical foundation (Vygotsky, Krashen) [67, 140]

Music supports cognitive, emotional, and linguistic development through social interaction, motivation, and positive affective experiences.

3. Curricular and methodological foundation (Bresler, Ciolan, Hash) [102, 17, 128]

The integration of disciplines represents a modern educational strategy aimed at developing competencies, promoting contextualized learning, and fostering interdisciplinary thinking.

4. Foundation of music education (Gagim, Bularga) [119, 9]

Music is an essential component of general culture and should be integrated with other arts and humanities disciplines in order to ensure the harmonious development of personality.

A comparative analysis highlights the fact that, although these scholars come from different philosophical, psychological, and pedagogical traditions, they all converge on the idea that music transcends the status of an autonomous artistic discipline and becomes an integrating factor within the educational process. In their view, the integration of music with other disciplines facilitates the development of cognitive, linguistic, aesthetic, social, and moral competencies, promotes authentic and contextualized learning, and contributes to the formation of a creative, reflective, and culturally responsible personality. This theoretical convergence provides a solid foundation for designing an interdisciplinary curriculum centered on learners and the development of key competencies.

From our perspective, following the analysis of these prominent scholars, we attempt to define the integration of music with other disciplines within the context of schools in the **Arab sector of Israel**. The integration of music is examined from the perspectives of **integrated curriculum, competency-based learning, and arts education**. The concepts of **methodological integration, interdisciplinary strategies, motivational tools, and the educational use of music** represent complementary dimensions of incorporating music into the teaching–learning process.

1.3 The correlation between music and elementary school disciplines (language; Arabic, Hebrew, English as a foreign language, Math, Science, and Religion)

Music and language. Music is inherent in the spoken language. This is known to us from *the language* of newborn babies. Idioms like the music makes the tone [the message] or need to listen to the music and words, are an expression of the importance of the musical elements of verbal communication.

Many young children show a natural inclination to hum or sing, making it valuable to build on their musical interests while supporting the development of literacy skills. Music is widely recognized as an important resource for language and literacy development, as songs often provide children with their first exposure to patterned language, grammatical structures, and rhyme. Krashen's affective filter hypothesis [121] suggests that successful language learning is more likely to occur when learners experience a low affective filter, characterized by a positive attitude toward the learning process. Singing can help create such conditions because it provides a supportive and enjoyable learning environment that encourages language acquisition [140].

Music can be naturally integrated throughout language curricular areas. It is done to develop vocabulary and comprehension skills. Researchers found that music can also develop listening and oral language skills. Music also is known by the effect of focusing the attention and memory, and developing abstract thinking [105; 140].

Ion Gagim is the promoter-creator of the formative concept in music education. According to him, the acquisition of knowledge is achieved mainly by living auditory experiences [91]; the integration of the contents is dispersed according to the forms of musical initiation: the musical-rhythmic activity forms knowledge from the metro-rhythmic system; musical reading and writing formed visions of musical notation; the formation of knowledge about music will take place in a "strict succession and well thought out volume" and will be resumed at a higher level in the following classes [Ibid., p. 97].

A wide range of activities can incorporate music into storytelling or introduce narrative elements into songs and other musical compositions. Music can enrich language lessons that focus on grammar, reading fluency, writing, and other literacy-related abilities [140]. It can also support the development of diverse language skills, including sentence construction, vocabulary, pronunciation, rhythm, and the identification of parts of speech [153].

From here, the core curriculum which will consider this aspect emphasizes public speaking, such as reading texts aloud, listening critically to narration and speech in the various media, in practice the voice to express emotional character messages, etc.

In the dialogue with the Director of music and written language in the songs the singer and song. Here we have a double role: music interpretive role - it provides the dimension text,

emotional performance, and social role, it helps to make the text of the rule and should be retained in the memory of the individual and the community, and thus it contributes to a common cultural base [81].

Music and Foreign Language Acquisition. Learning a second language can be a demanding and stressful experience. To support language acquisition, foreign-language teachers employ a variety of classroom techniques and strategies. Krashen [121] argues that successful second-language learning requires a low affective filter, meaning an environment with minimal stress and little sense of threat. Learners also need stimulating resources that encourage engagement and help them retain new language. Music is frequently used in foreign-language instruction because it offers numerous benefits for the language-learning process.

Krashen's Input Hypothesis [121] emphasizes that language input must be comprehensible in order to be effectively acquired. As part of his Monitor Model, Krashen formulated five hypotheses concerning language learning, the fourth of which focuses on comprehensible input [121]. According to this hypothesis, acquisition takes place when learners are exposed to language that is interesting, understandable, and slightly above their current level of competence, commonly represented as $i + 1$ [1]. In other words, the linguistic material should correspond to the learners' level or be only moderately more advanced. Dividing language into smaller, understandable units, often referred to as "chunks," can facilitate acquisition. Through word and sound play, learners of different ages and proficiency levels can incorporate useful language patterns into their linguistic repertoire [115; 121; 133].

The use of music in the foreign-language classroom is consistent with Krashen's Input Hypothesis. Songs and musical activities can reduce anxiety and inhibition, while learning a new concept through music may feel less intimidating than receiving information through a lecture or completing a worksheet [121]. Music can also remove social barriers and contribute to the creation of a more welcoming classroom environment [133].

Music can be integrated into classroom activities in several ways. For example, group singing may reduce interpersonal barriers, diminish excessive competitiveness, and encourage cooperation among learners [121]. Music also reflects the principle that language input should be meaningful. Songs can motivate students because their lyrics frequently express ideas and experiences that are emotionally relevant to them [133]. Since music often reflects emotions and real-life situations, it can help learners establish a personal connection between the second language and their own experiences. Creating such relevance is an important condition for effective learning [133].

Learners at all levels can benefit from the use of music in foreign-language instruction. Songs provide an effective context for teaching vocabulary. Although beginners may not possess sufficient vocabulary to understand every word, they can identify familiar words and expressions [133]. Presenting language that is slightly beyond the learners' current level can stimulate curiosity and encourage them to discover the meanings of unfamiliar words. Musical activities also promote classroom participation, as students are often motivated to learn the lyrics of a new song and take part in related tasks [133]. Furthermore, the use of songs can foster creativity and critical thinking. More advanced learners may interpret the meaning of a song or compose an additional stanza [133].

Chants are another widely used resource in foreign-language classrooms. Carolyn Graham created many of the chants currently used in language instruction [153]. These activities expose learners to natural intonation patterns and common idiomatic expressions [153]. Through repetition and regular practice of grammatical structures and vocabulary, chants help students consolidate language and store it in long-term memory.

Chants also place particular emphasis on second-language pronunciation [133]. Patricia Richard-Amato observed that it is not always necessary to interrupt the activity in order to correct learners' pronunciation, as students can often acquire more accurate pronunciation through repeated listening and practice. Chants also help learners remember and internalize linguistic patterns. Because foreign languages contain numerous structures that must be learned and memorized, chants serve as a useful mnemonic resource. Rhyme and rhythm make the material easier to remember and help students retain the grammatical or cultural meanings associated with it [133].

Music and math. Research has identified a significant relationship between musical education during early childhood and the development of neural connections associated with mathematical understanding [151; 163; 132]. Several studies have also examined the practical integration of music and mathematics within classroom instruction [169; 50; 118]. Other findings indicate that students who received musical training achieved higher results in mathematics than those without such training [158; 142; 143]. A particularly notable study conducted in Austria and Switzerland showed that students who studied music for five hours per week, rather than attending five mathematics lessons, achieved results comparable to those of their peers who did not study music and devoted that time to mathematics [151].

Another research found Teachers developed a greater awareness of 'where the Maths is' in an activity, for example through explicit use of patterns to support composition activities [132]. Teachers gained a better understanding of how integrating Maths and Music teaching can be used to create more inclusive learning environments [132]. Integrated approaches provide a shared

language that begins to bridge the musical and mathematical learning in the curriculum [132]. Teachers worked collaboratively with colleagues with different strengths to plan and deliver interdisciplinary activities. Research shows that teachers are very interested in developing these approaches. Although there is a need for further teacher training and support, there is evidence of progress already being made in schools [173; 172].

Music and religion. Throughout history, music has often been associated with social permissiveness and immoral behavior, leading religious leaders and representatives of different faiths to discredit it. At the same time, religious traditions have incorporated music as an essential element of worship. Religious musical practices are supported by descriptions of sacred musical events and prescriptions found in ancient religious scriptures. Although contemporary Israeli society is strongly influenced by secular values, Arab religious communities continue to preserve their traditions and uphold religious norms, despite their unavoidable exposure to Western and secular culture. Consequently, the tension between tradition and modernity strongly influences musical activities within these observant communities, intensifying historical contradictions and creating new challenges.

The study conducted by Erlich and Badarne [87] showed that associations between music, permissiveness, and immoral behavior may be redirected when passion is expressed through religious devotion. Musical activities and behaviors that are normally prohibited may become acceptable when they serve educational purposes. One of the most prominent themes identified in the study was the social image of the music teacher. The two music educators combined two identities: they were members of religiously observant communities while also participating in professional music-related environments. This dual position enabled them to gain the trust of their communities while carefully questioning and extending the boundaries established by religious norms. Their knowledge of religious traditions and historical practices allowed them to negotiate these limits with caution and sensitivity. At the same time, their professional expertise and personal musical experience encouraged them to broaden the musical opportunities available within their communities and, in some cases, to contribute to cultural change. This delicate balance depended on their ability to preserve a positive religious image. Both teachers acknowledged that certain musical and cultural activities undertaken by their former students were activities from which they themselves still had to refrain in order to maintain their influence on future generations.

The findings of Erlich and Badarne's study [87] illustrate the multicultural interaction characteristic of contemporary Israeli society. Within traditionally religious communities, music functions simultaneously as a social practice, an educational activity, and a form of religious expression. Music teachers who live in these communities and participate in their social life move between the roles of community insiders and professional outsiders. When successful, they are

able to reinterpret traditional religious norms, expand the presence and practice of music within their communities, and reveal the differences between religious legal requirements, the philosophical perspectives of particular faiths, and contemporary cultural practices.

Music in Islam. In many religious traditions, the role and use of music remain subjects of debate. Certain conservative interpretations of Islam are opposed to musical practices, which has contributed to the widespread perception that Islam generally imposes restrictions on music [137; 138; 120].

Within Islam, some strict interpreters consider almost every form of Mosaqa unacceptable. One limited exception is the permission granted to women to play a small hand drum known as the daveh, similar to a tambourine without metal jingles, provided that it is played exclusively among women and that no men are present. Men are not permitted to play the daveh. A further concession allows young girls to sing during religious celebrations and women to perform “decent” songs for other women at special events. Even these practices may be regarded either as Makruh (discouraged) or as Haram (forbidden) [137; 138; 120].

One important modern source associated with this perspective is the work of the late Sheikh Muhammad Nasir ad-Din al-Albani, who lived in Jordan. In 1994, he published a book entitled *Tahrim Aalati t-Tarab* (The Prohibition of Musical Instruments). In this work, music is interpreted as a form of “idle talk,” based on a quotation from the Qur’an, Surat Luqman 31:6. In early Qur’anic interpretations, this expression referred to morally questionable activities such as slander and lying, although it was sometimes also associated with singing and playing musical instruments. Such forms of speech were further linked to the misleading voice of Satan. From this perspective, musicians engage in useless or potentially harmful activities instead of praising Allah and acquiring knowledge about Islam. This constitutes one of the principal arguments against music [138].

According to this interpretation, music is considered unproductive because it creates no tangible result or achievement. For this reason, some moderate strict interpreters value the musical activities of amateurs more than those of professional musicians. Professional musicians are believed to devote excessive time to practice, time that should instead be spent remembering Allah. The acceptance of military and occupational songs by certain strict interpreters is generally justified by their perceived ability to increase motivation and productivity [al-Ghazali [d. 1111], cited in 160]. In contemporary contexts, the money spent on purchasing music is also contrasted with the possibility of using those resources for charitable giving [138; 137].

Music and (religious) passion. One of the most comprehensive studies of Islam and music is Amnon Shiloah’s work *Music in the World of Islam* [160]. In the fourth chapter, entitled “Islam and Music,” Shiloah examines classical Islamic sources and emphasizes the widely held belief that

music possesses a powerful influence capable of affecting the listener's soul in an exceptionally intense manner [160]. Similarly, Abu Hanifa [d. 767] compared musical instruments to wine for the soul, arguing that their effect could be even more harmful than that of intoxicating beverages [cited on <www.islam-qa.com>]. According to the ninth-century theologian and jurist Abi 'I-Dunhi [d. 894], in his work *Dhamm Al-Maldld* (The Book of the Censure of Instruments of Diversion), music may lead believers away from devotional life and should be treated in a manner similar to other prohibited activities, such as gambling and drinking [160].

The central issue in these arguments is the presumed and recognized power of music. Music is viewed as a potential competitor for human passion, which, according to this perspective, should be directed toward Allah. Instead, passion may be invested in an activity considered useless but powerful enough to become obsessive. Music is also believed to have the potential to spread throughout society and contribute to a general decline in moral standards and personal decency [138; 120].

Music and Sinful Conduct

These ideas lead to a discussion of the relationship between music and sinful behavior, particularly in connection with listening to or performing music. Strict interpreters generally distinguish between intentionally listening to music and merely hearing it; the latter is not necessarily forbidden, although it should be avoided [138]. Intention is a fundamental concept in Islamic morality, ritual practice, and jurisprudence. If a person deliberately listens to music in order to enjoy it, the act may be considered sinful; however, if the person hears music accidentally and does not seek pleasure from it, it is not regarded as a sin [138]. More liberal interpretations maintain that music itself is not inherently harmful and that the surrounding circumstances are more important. From this perspective, the place, time, and company associated with musical performance or listening are decisive. If music is connected with prohibited activities, such as alcohol consumption or drug use, it may also be considered forbidden because it contributes to sinful behavior. The strictest interpretations, however, hold that music itself can encourage sin and should therefore be prohibited. [138; 120].

The word "MUSIC" is not mentioned in the QURAN (it is mentioned in the Prophet Muhammad "Sira"- Prophetic Biography).

Instruments in prayer are not acceptable in Islam religion, DRUMS AND PERCUSSION is OK. Composing words from Holy Scriptures (despite the "Tajweed"), "AZAN" - call for prayer. Call to prayer by vocal solo of a man not a woman, is beneficial, but also by traditional melodic patterns depending on the scale, and the length of the notes. Another important theme is Women and Gender.

SUFI, have a positive attitude towards music in relation to spirituality. Another common theme: “For educational purposes – it’s, OK?” In Muslim society men can afford to do things that women can’t.

1- Islamic religion does not forbid using music generally, but there are some reservations, that depend on the use of music, if it is related to bars or dancing or any unacceptable behavior.

2- Some Islamic clerics forbid the use of music, especially musical instruments, women's songs; others allow the use of percussion.

3- Not acceptable to read the Koran with accompanying instruments.

1.4 CONCLUSIONS TO CHAPTER 1:

The integration of the arts has gained increasing importance in school curricula, with music gradually becoming part of classroom instruction. Research highlights numerous benefits associated with incorporating music into teaching. It can be integrated naturally across language-learning activities to expand students’ vocabulary and strengthen comprehension. Music may also support the development of listening and oral communication skills, improve attention and memory, and encourage abstract thinking. Furthermore, it can reduce anxiety and inhibition among second-language learners, while its meaningful lyrics can increase motivation. Musical activities help maintain students’ engagement, reduce behavioral difficulties, and improve academic performance. Regular music listening or formal music instruction may also contribute to better concentration, stronger speech abilities, and improved reading and language skills. By enriching lesson content and making it more meaningful, music encourages students to become more interested and involved, helping them remain focused for longer periods and retain information more effectively.

Many studies on music integration in many disciplines were conducted. There are correlations between music and elementary school disciplines (language; Arabic, Hebrew, English as a foreign language, Math, Science, and Religion). While controversial attitudes toward music are in Islam religion, still, the dominant attitude forbids music, or playing music. Despite that, there is an increasing interest in music integration in Israel and in the Arab sector. This interest requires further examination of the issue.

The integration of methodologies of music education is not limited to the development of new methods, technologies, and techniques for stimulating the formation of students' artistic-esthetic culture, but also involves the valorization and reconceptualization of existing methodologies, excluding the inhibiting factors. The driving force behind the formation of students’ musical culture elements is the methodology designed on the interaction between

education and music education, validated by: the principles of interaction and the syncretism of the arts.

It has been demonstrated that the integration of music into primary education subjects cannot be learned theoretically, but must be lived and directly experienced. Beyond teaching the necessary knowledge, education should focus on the formation of attitudes, taste, character, and a lifestyle centered on the entire human condition.

2. DEVELOPMENT OF THE PEDAGOGICAL MODEL FOR THE USE OF MUSICAL ACTIVITIES IN THE EDUCATIONAL PROCESS OF PRIMARY EDUCATION

2.1. Integrated Core Curriculum into Music Education

From the perspective of the principle of integrity, ECTIP acquires the characteristics of an integrated system and involves the valorization of the stages of integration that combine three categories of relationships:

- between the ECTIP process as a system and its components;
- between the components of the system;
- between the ECTIP process and the global educational and social system.

The analysis of the components and their interactions in the evaluation process from an integral (systemic) perspective can be performed from various viewpoints. As a result, ECTIP, from the perspective of the principle of integrity, leads to the development of an evaluative approach, in our view, based on:

A) Analysis of the components and their characteristics:

1) externally, ensured at the level of the relationships between: the educational system and the socio-economic system. ECTIP from the system's perspective monitors the degree of achievement of the macrostructural goals, verifying the contribution of the educational system to socio-economic development.

2) internally, ensured at the level of relationships between evaluation and other elements of teaching activity. Developments recorded in the theory of the instructional process, under the impact of the systemic approach, have led to essential reconsiderations in terms of school evaluation, by considering it as part of the activities it entails: teaching - learning - evaluation. Alongside teaching and learning, evaluation completes the unity of the educational process, especially since it relates the results to the contribution of its component elements. The operation of evaluation is not a supplementary or overlaid step in the learning process, but constitutes an integrated act in the pedagogical activity. Evaluation constitutes an opportunity to validate the correctness of the components of the teaching process

3) In functional terms, ensured at the level of the relationships between the management of the educational system and the management of the evaluation process, it highlights the starting point of the system. Evaluation plays an important role in realizing educational reforms, undertaken at the scale of the entire educational system and process, fulfilling functions of continuous regulation and self-regulation.

4) In structural terms, ensured at the level of the relationships between the elements/components of the methodology/technology for organizing and conducting the evaluation process. In this vision, the principle of integrity manifests itself starting with the three

types of operations that are closely interdependent: measurement - assessment - decision. One without the other, these three operations are unjustified. Together, they involve a system of concepts, measurement techniques, objective assessment criteria, and coherence of standards to adopt quality decisions. In order to know the multiple and varied aspects of the student's activity and the results obtained, it is necessary to use a diversity of integrated methods and forms/strategies of evaluation within a system.

5) Operationally, ensured at the level of the relationships between the assumed educational/operational objectives and the results obtained at the end of a teaching activity; the analysis of the realization of the essential functions of the evaluation process: observation, information, diagnosis, forecasting, selection/decision, certification.

B) Analysis of the relationships between the components of the system. Addressing each component is necessary but not sufficient. Evaluation is carried out efficiently only as a result of the relationships between the elements of the system, which can be:

- *Bilateral* (between pairs of elements; for example, formative evaluation);
- *Simultaneous* (between three or more components; for example, the evaluation operations: measurement, assessment, decision);
- *Functional* (those that happen effectively within the process; for example, initial evaluation, formative evaluation, final evaluation);
- *Contextual and hierarchical* (some elements are less important within the system, while others hold greater significance);
- *Differentiation and asymmetry* (the relationships between the teacher-student; teacher-student-parent).

C) Relationships between the system and its components. The system is not merely the arithmetic sum of the subsystems that compose it; it has a unitary character, with functions and distinctive features compared to those of the subsystems. It has an emergent character. Modifications at the level of subsystems affect, in one way or another, the dynamics and functionality of the system. For example, the quality of a test evaluating school competences has repercussions on the results obtained.

D) Relationships with the context. The evaluation process, as a system, also acquires the character of a subsystem within a larger, more complex system — the educational system. Through the evaluation process, the mechanism of reaction, feedback, and reintroduction of the outcomes of previous actions takes place, aiming at adjusting and self-adjusting the process to increase the chances of success. The principle of integration allows the identification of connections not only between ideas and processes in a single field but also between ideas and processes from different fields and from the world outside the school. Therefore, the educational process, and by extension,

the evaluation process receives *input* from society (finalities and resources), the education system responds through *output* (preparing individuals for different social roles), which society either accepts or rejects [1, p. 436-438].

Thus, at the level of ECTÎP, the principle of integration allows the establishment of clear convergent relationships between elements. In accordance with systems theory, which clearly influenced the works of C.G. Salzmann, the "object", constantly changes its configuration depending on the viewpoint [apud 1]. The same "object" can be, depending on its place in the superordinate structures, either an element, a unit, a type, or a category. Therefore, the evaluation process, for example, is an element within the educational system, or a unit when viewed as a separate process with its constituent elements (such as evaluation methods, types of evaluation, etc.).

It is noted from the above that each component interacts with others, and any modification in one component will affect the others. Understanding these relationships is important, as it allows for control over the progression of the ECTÎP process and improvement of its quality. The evaluation process involves a multitude of components/elements, which is why in our research (ECTÎP), the ***key principle is the principle of integration, especially since the educational system is also based on the global theory of the human being—an integrated personality.***

In this context, we evoke that the current edition of the *National Curriculum* [18] highlights the "transdisciplinary axiological/value framework based on the profile of the primary education graduate as a new concept with semantic implications regarding the finality of the educational system. As a result, promoting inter- and transdisciplinarity in the school curriculum determines the design of an integrative technology for evaluating students' transdisciplinary competences at the end of primary education, focused on applying a systemic, integrative vision on various levels and domains of knowledge/curricular areas.

In the light of the above, the technology *for evaluating students' transdisciplinary competences* at the end of primary education is grounded in the global *principle of contemporary education*—the principle of integration—and can be achieved through complex test systems with a relatively sophisticated internal structure, yet allowing a general assessment of the instructional performance, in *an inter- and transdisciplinary manner*. We believe that ECTÎP demands the design and utilization of a transdisciplinary test with integrative items—an integrative-type test. The choice of the test, moreover, is justified by the conceptions of the evaluative researchers previously mentioned, according to whom this tool meets the main qualities of an evaluation instrument—*validity, reliability, objectivity, and applicability*. In ancient Latin, "testimonio" means "witness, proof" of what happens in the spirit of truth.

Tests serve as an efficient means of *final evaluation*, consisting of a set of items used to

verify and assess the level of knowledge/skills assimilation by referencing a standard application scale.

VI. Pâslaru and V. Cabac state: "An educational test is a diversified set of tasks aimed at generally highlighting the effects induced upon the school population as a result of exposure to the influences of certain contents, events, contexts, or educational resources" [apud 1]. Based on this, terms such as docimological test, educational test, or simply test are some of the terms used in the specialized literature to refer to the evaluation tool/method that uses *item* as a specific element.

In the context of this research, we define ***the integrative test as an instrument through which students' transdisciplinary competencies at the end of the 4th grade can be evaluated, encompassing a wide range of mandatory (core) subjects provided in the National Curriculum for primary education.***

However, the option for *an integrative test* should take into consideration M. Manolescu's observation: "There are no universally valid evaluation tools" [apud 1], tools that would "cover" the entire evaluation framework and all curricular contents for primary education. Generally, it is considered that a sign of the validity of evaluation tools is their durability over time, and the test is the tool that has passed the test of time. We do not wish to suggest here that we advocate for a change in principles, methods, procedures, or approaches without rational, organic foundations, but rather that the need for conceptualizing the ECTÎP technology is generated by the current reforms of the educational system. After all, evaluation approaches and technologies can either close or open the educational world to new, authentic horizons.

From the above, the *concept of technology* emerges, which lends itself to an integrative approach. The conditions that offer us the possibility of an authentic alignment of the ECTÎP technology with the principle of structural and content integrity are outlined. The conceptualization of the ECTÎP technology from the perspective of the *principle of integrity* enhances the realization of the mutual interdependence of all the elements of the ECTÎP technology, both horizontally and vertically, harmoniously engaging all elements. We believe that only by combining the elements of the ECTÎP system, based on relationships of complementarity and a *systemic, integrative approach*, can we ensure the efficiency of the process of evaluating students' competences at the end of primary education. Based on the aforementioned, we define the ***technology for evaluating transdisciplinary competences as a process-based system, grounded in pedagogical values and principles, integrating all elements (educational goals, curricular content, specification matrix, integrated test) and operations that establish the correlation between domains of knowledge (curricular areas), aimed at evaluating school competences in line with the holistic personality of the young student.***

Research revealed that students who learned through integration of music in the core subjects produced work of a higher quality than participants who did not [86]

Definitions of the integrated curriculum differ among scholars and have gradually shifted over the decades toward a more student-centered perspective. During the 1950s and 1960s, integrated curricula generally focused on planning and organization, with the aim of providing learners with a coherent understanding of shared knowledge while encouraging them to identify new relationships and develop innovative educational models, systems, and structures [84]. Over time, these highly structured forms of integration were progressively replaced by more flexible, learner-centered approaches, in which children explore knowledge from different subjects through topics connected to aspects of their surrounding environment [73; 123].

This approach seeks to overcome traditional subject boundaries by connecting various elements of the curriculum around meaningful and broad areas of study. It adopts a holistic perspective on teaching and learning and reflects the interactive nature of the real world [162; 161; 73].

Bresler [79] distinguished four forms of integration that may occur in the everyday curriculum of ordinary schools, each involving particular objectives, content, teaching methods, and roles: subservient integration, co-equal integration, affective integration, and social integration [79].

Subservient integration places the arts at the service of other academic disciplines. For example, the song Fifty Nifty United States may be used to help students memorize the names of the fifty states.

Co-equal integration treats the arts as an equal partner to other subjects. This approach requires knowledge specific to each discipline; for instance, a social studies lesson may include the study of composers, the historical periods in which they worked, and their musical compositions in order to place social events within a broader historical context.

Affective integration uses the arts either to influence students' emotional states, such as employing music to promote relaxation, or to provide opportunities for creative expression, such as using recorded music as a stimulus for improvised dance.

Social integration resembles affective integration because both complement the academic curriculum. However, social integration focuses on the social functions of schooling, for example, organizing student performances to provide entertainment and encourage attendance at parent–teacher association meetings [73].

In another study, Snyder [147] described three levels of integration. The first, referred to as Connections, is comparable to Bresler's [79] subservient integration and represents a superficial, one-way relationship in which materials or concepts from one discipline are used to explain or reinforce content in another curricular area [73]. The second level, Correlations, establishes links between two or more disciplines through shared topics or materials, such as using musical time signatures when teaching fractions in mathematics. However, genuine integration occurs only when the distinct identity and integrity of each discipline are preserved [167]. At this level, integration functions as a two-way process, similar to Bresler's co-equal integration, in which ideas are applied and synthesized across disciplines. This approach promotes deeper understanding and critical thinking, for example, by examining how form is created through variation and repetition in poetry, music, and architecture [73].

In the model of Fogarty [90] 10 levels of integration are outlined, ranging from fragmented (in which academic disciplines are kept separate and distinct) to networked (in which a learner-directed process is supported by a network of advisors and resources) [73].

The principal forms of curriculum integration include: integrating knowledge around a central theme; curriculum integration within a single school day; curriculum integration across a sequence of instructional activities over time; curriculum integration through thematic projects; and curriculum integration through integrated elective courses.

In his research, Ion Gagim conceptualizes the curriculum, textbooks, guides that generally provide a conceptual, teleological, content and methodological framework sufficient to integrate music into lessons in different curricular areas, but this does not exclude the need to re-conceptualize this process. From the perspective of modern principles, this offers a greater methodological freedom to the teacher and a better capitalization of students' interests and motivations for learning. Under these conditions, the integration of music becomes a cognitive constituent of musical competence as a system: knowledge is transformed into abilities and attitudes and thus **the integration of cognitive, psychomotor, and attitudinal domains into musical competencies - the main purpose of music education.**

The national association of music education wrote the standards for music education.

National Standards for Music Education (NSME)

- ✓ The NSME identify the following core competencies in music education:
- ✓ Performing a diverse repertoire of songs, both individually and in collaboration with others.
- ✓ Playing a varied selection of musical works on instruments, independently and as part of an ensemble.
- ✓ Creating improvised melodies, variations, and accompaniments.
- ✓ Composing and arranging musical pieces according to established requirements.

- ✓ Reading and writing musical notation.
- ✓ Listening to, examining, and explaining different forms of music.
- ✓ Assessing musical works and performances.
- ✓ Recognizing the connections between music, other art forms, and disciplines beyond the arts.
- ✓ Understanding music within its historical and cultural contexts. [135]

In the past two years the Education Department and elementary school curriculums Department in Israel worked on core plans for elementary schools. The purpose of these curriculums is to point out the essential elements in learning each subject [179].

The preparation of core curriculum gives an opportunity for self-examination and reflection of teachers of the various disciplines, including teachers of music. It also serves as an invitation to discussion and re-thinking of the objectives of music education and the ways to achieve these goals [179].

Music is a means of expression and communication that has accompanied the development of human society from its earliest beginnings. In today's media-oriented society, it performs an important sociocultural and psychological function. Music primarily influences the emotional sphere, and this constitutes its distinctive power: it serves both as a means of personal expression and as a factor that promotes social cohesion through religious and secular ceremonies, folk singing, and other collective practices [179].

In a rational society, where the value of significant activities is often measured through outcomes and logical cause-and-effect analysis, music and other forms of artistic expression may be marginalized. Prioritizing reason over emotion can lead educational decision-makers to regard music merely as an element that makes the curriculum more attractive, assuming that resources can be allocated to it only when additional funding becomes available. This perspective is fundamentally mistaken. Music also has an intellectual and cognitive dimension, enabling individuals to explore the complexity of their emotional world through a sophisticated system of highly abstract symbols [179].

Music is one of the richest domains for intellectual development. Although it provides a means of expressing emotions aesthetically, it also activates a complex range of cognitive abilities [179]. These abilities can be manifested at three levels:

A. Within music as an independent field of knowledge and practice;

B. In areas that are connected to or partially overlap with music, such as language, movement, and mathematics;

C. At the sociocultural level, where music functions as a means of expressing collective emotions and preserving traditions, customs, and values. [179].

The music is where the heart and the mind, body and soul are in dialogue, and metaphorically-music is a duo for cognition and emotions. The essential ingredient in musical activity is the ability to listen [179].

The core curriculum of music is based on two theoretical assumptions:

1. Music is a universal phenomenon, and an individual's ability to absorb and generate musical utterances is an inborn ability. I mean, anyone who has this ability is growing in society that has music (and there is no society without music) and is independent of special talent or systematic learning [179].

2. It is the duty of each school to assist the development of the musical potential, just as he sees his duty to nurture the linguistic potential of students [179].

In the musical activity is an activity where body and mind, thought and emotion by the cognitive work in a harmonious orchestration [179].

Its premise is that the task of creating a musical book balances the emotional and the intellectual dimension of the students and provides tools for cognitive processing of emotion and imagination in artistic ways [179].

Based on these assumptions, it is possible to indicate some of the cognitive processes that underlie musical experience and can offer a number of principles to guide the educational activity. The following relate to the music of two points:

1. Theoretical reference, that defines the language of music.
2. Application to the planning studies:
 - a. Music as a built-in and independent domain.
 - b. Music in relation to other subjects [179].

1. Music as a language:

Music is based on elements like those of language.

Two languages – linguistic and musical are based on psycho-acoustic activity. This activity includes absorption of acoustic information units in the audio system (sound out phonemes.), and go to larger units with hierarchical structures. Therefore, the basic processes of these two languages are similar in their basics [179; 164].

"The building blocks" of the musical language are:

- A. A variety of sounds differs in a defined height.
- B. Units of time durations are based on beats at different speeds.
- C. Intensity that can be increased and decreased.

D. A variety that differs between similar height sounds, arising from different acoustic sources [179].

All these elements are combined in endless connections, by grouping and dissolution rules in hierarchical-syntax structure. These rules, inherent in the cognitive system, are expressed in a variety of cognitive tasks of output and input [179].

2. The planning of applications

Music as a built-in and independent domain:

Because musical ability is innate to a certain extent, people can respond intuitively to music without receiving formal instruction. Even without musical training, individuals are able to express themselves through sound, react to auditory stimuli, and experience musical enjoyment. Within the curriculum, music may be viewed through three main dimensions: the cognitive-psychological, social, and creative dimensions [179].

The Cognitive-Psychological Dimension

Since music is closely connected with emotions, it can function as a reflective means of examining feelings and emotional experiences, both in terms of reception and expression. Music also represents a form of thinking, and the ability to use it as a means of expressing thought develops through practice and experience [179].

From a receptive perspective, listening to music involves attention not only to the musical work itself but also to the emotions it evokes in each listener. Discussing a musical composition can help students explore its impact, consider how it affects listeners, and understand the reasons for these effects. Such reflection encourages openness to the diversity of emotional responses experienced by learners [179].

From an expressive perspective, children should be provided with opportunities to explore and communicate their feelings through the musical resources available to them. They may use their voices for immediate melodic expression, their bodies for rhythmic expression, or percussion and melodic instruments as additional means of communicating emotions [179].

The Social Dimension

Music emerged in the early stages of human history as a means of expression and communication, as well as a way of conveying collective moods and experiences. Although music can serve as an individual form of expression, it continues to play an important role in social communication and cohesion. In Israeli society, this function is particularly visible in religious and

secular ceremonies, holidays, national commemorative events, and large youth gatherings centered on rock and popular music [179].

Although classical music has a relatively limited audience, it has historically served as a complex means of expressing social aspirations and ideals. Italian Renaissance music provides a clear example, as it expressed the desire to break away from religious constraints and promoted the idea of individual expression [179].

Social and musical activities involving classical artistic music, whether through choral singing or collective instrumental performance, can provide some children with satisfaction and enjoyment. Other children, however, may show resistance to this type of activity. For this reason, such musical experiences should be organized in ways that take into account the personal motivation and interests of each learner [179].

Engagement with artistic music generally requires both emotional involvement and intellectual effort. In order to help young children recognize the characteristics of this music and understand its possible contribution to personal development, teachers need to identify musical works that are meaningful and appealing to them. Since musical preferences vary from person to person, educators should not expect all learners to respond to the same music in an identical way. Instead, teachers should expose children to a variety of musical works and allow them to express both their enthusiasm and their reservations [179].

An important result of this approach is the recognition and validation of individual tastes and preferences, which form the foundation for developing aesthetic judgment. It is also important to distinguish between the social nature of musical activity and the individual nature of listening. Collective listening should not automatically be considered preferable to individual listening, unless the objective is to cultivate the habit of attending concerts [179].

The Creative Dimension

Music serves as a means of expressing emotions, while musical activity involves reflection on and experimentation with sounds. This process is based simultaneously on universal emotional experiences shared by humanity and on the human capacity to create diverse forms of emotional expression shaped by sound culture, context, and style. Research suggests that people from different cultural backgrounds are able to recognize the emotional meanings of unfamiliar music, and that children without formal musical education can also interpret various musical expressions in emotional terms [179].

Hence, the emotional expression aspects, is a central element in core music curriculum. The curriculum schedule for these options:

Creating music:

- * Thinking in sounds about the various emotional expressions, and to perform them in ways that are available to them (body, voice, percussion), through improvisation.
- * Listening to the works of their peers.
- * To receive and give feedback from kids in their class.
- * To improve their work and bring it to a certain level of finishing (according to the best of their ability and judgment).
- * To preserve the recording and/or writing [179].

Meeting music literature:

- * Listen to music (from easy to hard, close to, from the long to the short).
- * Respond to sounds an interpretive response while listening ("static" or "dynamic" movements; drawing, imagination), or after listening (talking, writing, painting, etc.).
- * Listening to music or to play music in class.
- * To evaluate different types of music [179].

Curricular integration has become an increasingly significant element of school reform, especially in primary education. Although the idea of using a cross-disciplinary approach to achieve educational objectives can be traced back to antiquity, it was initially applied mainly in an informal manner [73]. Over the last two decades, this approach has received greater scholarly and public attention, particularly through the work of psychologist Howard Gardner [95; 97]. His theory of multiple intelligences broadened the traditional understanding of intelligence, which had focused primarily on reading, writing, and mathematics, by recognizing a wider range of intellectual abilities [73]. These include linguistic, musical, logical-mathematical, spatial, bodily-kinesthetic, and personal intelligences. Gardner [95] illustrates the practical application of his theory through the example of computer programming.

The development of global culture and the rapid expansion of information resulting from technological progress, including the Internet, have made the task of educating future generations increasingly complex. As Lake [124] observed, many teachers feel that the school day is insufficient for covering all the content required by the curriculum, which continues to expand each year [124, p. 3]. This challenge is intensified by the fact that much of the technical knowledge taught today may become outdated within the next decade [73]. Consequently, the role of teachers should extend beyond the simple transmission of information. Educators must help students develop reasoning skills, think creatively and independently, and apply what they learn to circumstances that may differ substantially from those of the present. In this respect, music can make an important contribution to the development of creativity and critical thinking [73].

According to the scientist Ion Gagim, musical intelligence, like other human capacities, can be developed progressively, moving from an elementary level toward more advanced stages. At the same time, musical intelligence can make a significant contribution to the development of general human intelligence [23, p.256].

One example of research examining outcomes beyond the arts is Aschbacher's [55] comparative study of schools that implemented an interdisciplinary, thematic, and team-based approach to humanities education and schools that followed a more traditional model. The results demonstrated statistically significant improvements in writing and subject knowledge among students in the integrated program, with the most substantial progress occurring in conceptual understanding. By comparison, students enrolled in traditional programs showed no improvement in this area [73]. The study also found that students in the integrated program remained in school for longer periods, demonstrated greater effort according to both self-reports and objective measures, and expressed more positive attitudes toward school [73].

Another relevant example is the three-year longitudinal study of "Learning through the Arts" (LTTA), a Canadian school-wide arts education program. The research, which involved more than 6,000 students, as well as their parents, teachers, and school principals, found that sixth-grade students participating in LTTA achieved significantly higher scores on computation tests than students in control schools [166]. Other studies have associated integrated curricula with improvements in students' attitudes, attendance, motivation, work habits, and standardized achievement scores [54; 73; 72; 81; 116; 128; 166].

Students are not the only participants who may benefit from an arts-integrated curriculum. Research indicates that primary school teachers [52; 72; 100] and secondary school teachers [85; 128] can also be empowered by innovative teaching methods and by the more positive, cooperative school environment associated with curricular integration [73; 74].

2.2. Approaches to teachers' attitudes and efficiency in integrating music into the teaching of other disciplines

Teachers' ability, attitudes, and motivation to use the arts as a tool in their practice are linked to their education — from experiences with children, course preparation, experiences in the arts, and other subjects [75; 142].

"The value and importance of music methods in school are not always recognized by teachers whose beliefs about the field and their effectiveness in teaching music affect their performance as students and as teachers" [75; 179].

Researchers have found that teachers who had previous musical experiences as children consider music to be a valuable subject in the curriculum [74; 75; 178], "but not necessarily as important as other subjects" [49; 75].

Furthermore, "the idea that music is a 'special' subject, alongside physical education and art, conveys a low level of confidence among schoolteachers" [75; 114].

A series of studies support the idea that primary school teachers use music to various degrees and for multiple purposes, from transitions to the development of musical appreciation and skills [49; 74]. Analyzing the willingness of primary school teachers to integrate music-related training objectives reveals that many primary school teachers are unsure about the role of music in the general school curriculum [49; 75].

Sh. Battersby and A. Cave [75] refer to Ruth Whitelaw's investigation of music integration and its contribution to English-language instruction during a high-school English lesson [75]. Whitelaw observed that the teacher incorporated music because of her personal experiences and interests. The teacher's objectives were to capture students' attention, stimulate their thinking, help them connect separate pieces of information acquired at school, and encourage them to interpret and reflect on their learning [75].

The extent to which primary school teachers can integrate music into their lessons is strongly influenced by both their professional effectiveness and their personal appreciation of music [75]. According to A. Bandura [70], self-efficacy refers to an individual's belief in their ability to perform a particular task or achieve a specific level of performance. These beliefs influence people's choices, thoughts, behavior, and potential achievements [75]. As a result, individuals are more likely to participate in activities in which they feel competent and confident, while avoiding tasks for which they perceive themselves as insufficiently prepared [70; 75].

Research has shown that, although the proposed curriculum identified cross-curricular integration as one of its main objectives, closer examination revealed that subjects were generally taught separately and according to relatively rigid time schedules. This separation was attributed both to parents' expectations for advanced and accelerated academic instruction and to the absence of organizational structures that would support cooperation among specialized teachers within the school [75].

When teachers are not provided with formal requirements, such as clear instructions or assessment procedures, or with appropriate teaching resources, including textbooks and methodological manuals, the responsibility for integration rests entirely with the teacher or teaching team. Under these circumstances, successful integration depends on their initiative, creativity, imagination, and available resources [75].

Teachers' capacity and willingness to use the arts in their teaching practices are closely related to their educational backgrounds. These may include early childhood experiences with the arts, university-level preparation, and professional experiences in the arts and other academic disciplines [142].

Teachers' attitudes and their beliefs about education and the importance of the arts, more precisely, are shaped before entering college through their own observations during school" [75; 113; 132]. Researchers have examined students' attitudes from pedagogical faculties specializing in primary education and revealed that their opinions about music education reflected their childhood experiences in ensembles, clubs, and private lessons [49; 75; 77]. Those who had prior musical experiences as children consider music a valuable subject in the school curriculum [75; 77; 103], but not necessarily as important as other subjects [49]. Other students surveyed did not have prior musical experiences, while some recalled childhood discomfort in learning how to play an instrument or sing [53; 75; 162; 171].

However, others bring opinions and attitudes, values, and their own sense of teaching effectiveness to the program [135]. C. Stuart and D. Thurlow [170] state that future pedagogical students brought with them into their education programs beliefs about teaching and learning that were strongly influenced by their childhood experiences, and these beliefs will persist for a long time [75; 130]. Future teachers must be encouraged to articulate and examine these beliefs in order to avoid perpetuating current practices [75; 130].

F. Seddon și M. Biasutti [159] au constatat că învățătorii specialiști din afara muzicii judecă sau compară abilitățile lor muzicale dobândite în mod informal cu cele ale colegilor lor de specialitate în muzică, întărind în continuare complexe percepute. Aceasta contribuie la niveluri scăzute de încredere, ceea ce duce la un „ciclu de așteptare scăzută” al obiectivelor muzicale atât pentru învățător, cât și pentru elevii săi [75; 114].

Sh. Battersby and A. Cave [74] noted that candidates for primary education avoid using the singing method during the lessons, citing both anxiety and lack of skill based on the negative experiences they had as students in primary school or at home [54; 75; 161]. A common response is the unpleasant childhood experience that governs their current attitude, which tends to be negative not only regarding their acquired abilities as pedagogical students but also regarding their confidence in artistic acts like singing [75]. H. Apfelstadt [53] states that the subjects considered singing to be perceived as a very personal activity, and, most often, they cited a feeling of embarrassment or self-consciousness about their ability to sing [74].

When commenting on their past musical experiences, the subjects in S. Hennessy's study [130] noted that they believed a person had to be a skilled performer to integrate music [75].

F. Seddon and M. Biasutti [159] stated that teachers specializing outside music judge or compare their informally acquired musical skills to those of their music-specialist colleagues, further reinforcing the perceived complexes. This contributes to low levels of confidence, leading to a "low-expectation cycle" of musical goals for both the teacher and their students [75; 144].

A series of studies support the idea that primary school educators use music in various ways and for multiple purposes, from transitions to developing musical appreciation and skills [49]. Examining the willingness of primary school teachers to incorporate music-related training objectives reveals that many future teachers, as well as current primary education staff, are unsure of its role in the general school curriculum [49; 76].

Sh. Battersby and A. Cave state in their research that a series of studies were conducted to explore the activities that teachers consider useful and most are likely to implement independently in their lessons, without the assistance of a music specialist [74]. When asked what they found useful or were willing to implement in their lessons from what they had learned in methodology courses, teachers mentioned teaching activities based on singing, listening, movement, and integration [157]. T. C. Saunders and D. S. Baker [157] stated that most primary school teachers indicated that the skills and understandings they found most useful and practical were those that used music as a supplement to other curricular areas and also those they could use for entertainment and transition periods [76].

The effectiveness of primary school teachers in teaching music and their personal appreciation of music plays a significant role in what can be achieved during a lesson. According to A. Bandura [70], efficacy is the belief in our ability to accomplish a specific task or performance level. These beliefs govern our choice of actions, how we think and behave, and what we can achieve. Therefore, we will participate in activities in which we feel capable and confident and will avoid those where we do not [70]. It has been found that a teacher's effectiveness influences a range of student outcomes, including academic achievement [162], musical performance [139], and fear of failure [76; 151].

M. R. Stein [168] states that primary school teachers' attitudes reflect whether or not the music program values or emphasizes music education, and that "students form attitudes based on the values they see reflected in the environment by parents, family, peers, and teachers" [74]. This is why it is so important for teachers to positively influence their students' perceptions through their actions [136]. Teachers are decisive in shaping values and establishing music learning as a priority in children's basic education [168; 76].

A teacher's effectiveness can directly affect the number and types of musical experiences they offer their students. According to N. H. Barry [72], teachers with negative attitudes about music or low musical efficacy will not provide students with the same number and quality of musical experiences as teachers with positive attitudes and self-confidence. She continues to state that the number and types of musical experiences that teachers choose to offer are ultimately based on how comfortable they feel with a particular musical activity.

Vannatta-Hall [171] explains that opinions about efficacy will not only influence the activities an individual will implement but also the behaviors and the level of effort applied based on the perceived difficulty [75]. Teachers surveyed by A. M. Giles and R.J.D. Frego [99] considered that if they were unable to sing or perform various musical tasks in the classroom, they were reluctant to do so during the lessons. Kvet and Watkins [123] identified the lack of students' musical experience and training specializing in primary education as a variable that influences their perceptions of success, such as inhibiting behaviors related to achievement in music [73].

S. R. Barr [70] states that teachers who had no basic knowledge of artistic subjects and did not feel comfortable teaching the necessary skills could not or did not want to incorporate them into their curriculum [75].

Teachers with low efficacy tend to "maintain negative feelings about their teaching and have a narrow perspective on problem-solving and, as a result, consider their situation to be more difficult than it actually is" [73; 179].

Other studies based on teachers' experiences suggest that teachers who perceive themselves as inadequately prepared feel a lack of confidence and develop negative attitudes towards their ability to integrate music [74; 169], thus remaining reluctant to take risks and step out of their comfort zones due to fear of being judged" [68; 75].

In this research, teachers' attitudes towards the effectiveness of integrating music into teaching can be categorized into the following areas of efficacy:

- Emotional effect.
- Social effect.
- Cognitive effect.
- Motivational effect.
- Motor effect.
- Behavioral effect.
- Classroom management effect.
- Achievement effect.
- General personal attitudes.

The literature studied mentions various ways of integrating music, and there are several ways in which teachers can incorporate music into their teaching methods [69; 72]. "Both P. M. Hash [103] and C. M. Colwell [82] cite [81] concerning four types of artistic integration (subordinate, affective, social, and co-equal-cognitive) used by many classroom teachers in the United States" [75]. Studies [103; 142] suggest that the subordinate approach to integration, where the arts are used as a vehicle for achieving other academic objectives (such as singing the alphabet to teach and learn letters), is the most common form of integration. Many classroom teachers consider

using music in specific correlation with other subjects to be one of the most important types of musical integration [75; 166].

Affective integration involves using the arts to change the mood of individual students or the entire class, such as playing relaxing music when students return to the classroom after lunch or for creative expression, such as drawing after listening to a recorded piece of music. "Teachers view these types of integration as a way to dismiss the importance of music as part of the core curriculum and treat it superficially, like a mere form of entertainment" [75].

L. Bresler [78] points out that when music is present in a lesson, it is often used as a way to illustrate the subject being studied, as a break from other subjects, or simply as background music. By doing so, teachers teach children to ignore music and prevent them from having a "deeper understanding and experience," so they do not learn to "view music as a potential source of knowledge or emotional or intellectual investment" [78; 79].

Social integration uses the arts to participate in community or school events, such as ensembles. L. Bresler [79] stated that the social function of music is more valued than other functions used by music specialists. "When there is no music specialist, teachers who are able to include music in concerts and school programs are considered invaluable" [82]. Co-equal-cognitive integration recognizes that the arts and basic academic goals hold the same level of importance and should be incorporated equally [79]. L. Bresler [80] states that this is the least common form of integration because it requires specific content, knowledge, and skills characteristic of expert teachers [75]. As important as the concept of integration is for arts teachers, she warns that these different types of integration have different purposes, and music educators tend to favor the co-equal-cognitive style [81; 75].

D. Perkins [145] offers a series of ideas for teachers to easily implement independently and provide additional music-related activities that offer academic benefits without the assistance of a music specialist:

“(a) inviting musicians into the primary school and preparing students to interview them and ask about their instruments, training, and careers,

(b) clapping along to each syllable of poetry and songs, or using castanets or percussion instruments,

(c) scheduling excursions to concerts, orchestra rehearsals, and performances of all types of music, from folk to opera,

(d) exposing children to the sounds of orchestra instruments to create musical phonemic awareness, either through recordings or through preferred instruments and musicians,

(e) organizing several-week-long workshops, as they 'can produce the most dramatic results' [145; 74].”

"Since most schools consider music as entertainment to achieve greater educational goals, music is often marginalized [80], but these types of authentic experiences with professionals in the classroom can be a way for teachers and their students to 'embrace music as a distinctive educational technique' [145; 75]."

With the title of pioneer in the field of music education in the Republic of Moldova, the scholar I. Gagim, developed and substantiated specific methods of music education:

- The method of stimulating imagination – stimulating/mobilizing imagination through different forms: verbal, visual, auditory, kinesthetic, etc.;
- The heuristic method;
- The method of experiencing. The necessary condition for the emergence of experiencing music is the formation of a certain specific - emotional experience as a result of which the student leaves himself under the influence of the process of contemplating musical art (Gagim. I.) [24, p.77].

Ways to integrate music into teaching according to A. Merrell [133]:

Active learning experiences: 1. The approach involves playing background music thematically related to the subject matter while learners read a concise summary of essential information, followed by the reinforcement of this content through movement-based activities or role-playing exercises accompanied by upbeat music [117].

Concentration, Focus, and the Alpha State of Learning: 1. Baroque music by composers such as Bach, Handel, and Telemann, with tempos ranging from 50 to 80 beats per minute, has been proposed as a means of creating an environment conducive to sustained attention and relaxation, often associated with alpha brainwave activity. Such music may support vocabulary acquisition, memorization, and reading. 2. Similarly, lively compositions by Mozart may promote alertness following daytime naps and help sustain students' attention during reading and project-based activities [143].

Memorization: "The use of songs, chants, poems, and rap will improve memory for content information and details through rhyme, rhythm, and melody" [143].

Attention, motivation, and atmosphere: "Appropriately selected music can foster a positive learning environment and encourage students' active participation, potentially enhancing their attitudes toward learning and their motivation. Furthermore, musical rhythm and tempo may support the initiation and maintenance of attention" [143].

a. **Friendly atmosphere and attention:** "Background music can contribute to a welcoming classroom environment and support students' readiness and motivation to engage in learning tasks. Depending on its characteristics, music may enhance alertness when attention is low or promote

relaxation when needed. Playing music as students enter the classroom or transition to breaks or lunchtime may positively influence the overall classroom atmosphere” [143].

b. Community builders: “Music can foster a positive learning environment that encourages student interaction and promotes a sense of community and cooperation. It may also facilitate intercultural understanding and strengthen interpersonal connections. Practices such as selecting and playing songs in class, establishing music-based classroom rituals—including greetings and farewells—and incorporating collaborative musical activities can contribute to meaningful and lasting experiences of shared participation and belonging.” [143].

c. Personal Expression: “Music is the doorway to inner realms, and the use of music during creative and reflective periods facilitates personal expression in writing, art, movement, and a multitude of projects” [143].

Creativity and Reflection: “Background music may support cognitive processing, foster creativity, and encourage personal reflection. Contemplative music, such as solo piano compositions in classical or contemporary styles, may help students sustain attention during writing tasks. One study reportedly found that students produced twice as much written material when music was played as when they worked without it.” [143].

Personal Expression Through Musical Intelligence:

“Musical composition provides opportunities for students to communicate their thoughts and emotions while developing musical intelligence through an understanding of rhythm, tone, and musical form.”

Composing songs related to curricular content enables students to express their emotional responses to issues explored through historical events, social studies, or literary works [143].

Creating instrumental soundtracks using simple percussion instruments allows students to represent significant scientific discoveries, distressing historical events, or narrative developments within a novel through sound [143].

Music integration as a life field: Music is related to many areas of life and projects itself into various subjects. Therefore, the core music program offers varied combinations of social and educational activities. Cross-curricular integration is valuable because of its ability to connect school subjects with students' lives [137].

Two aspects, in the same vein, related to music:

- Music as a “life field” in one’s life and at school.
- Music as a field that is related to different subjects and areas of knowledge taught in school.
- Music as a life field is an important component of school ceremonies and is used as a “memory aid” and a tool for preserving cultural heritage. Music-social activities in school can be

used as a tool for social integration, especially when they take into account the musical traditions that students bring from home and respect for any musical-cultural expression.

Musical activity in school can be a basis for education for cultural consumption and participation in culture.

Therefore, music integration programs should include a variety of school initiatives that can reflect this position. For example, musical activities and songs during holidays; creating age-groups to play music and sing together; participation in musical events in school; setting up “circles” for music lovers in different styles (rock, classical, rap) [143].

Some of these initiatives will target all students, while others will be based on free choice and voluntary “interest groups” encouraged and supported by the school [117].

In this research, teachers' attitudes towards the effectiveness of integrating music into teaching are examined through nine domains of effectiveness:

1. Emotional effect.
2. Social effect.
3. Cognitive effect.
4. Motivational effect.
5. Motor effect.
6. Behavioral effect.
7. Classroom management effect.
8. Achievement effect.
9. General personal attitudes.

Literature mentions several ways of integrating music, there are several ways that classroom teachers can include music along with their teaching methods [68; 69]. “Both Hash [103] and Colwell [82] cite Bresler’s [79] discussion of four types of art integration (subservient, affective, social, and coequal-cognitive) used by many classroom teachers throughout the United States [74]. Studies [99; 144] suggest that the subservient approach to integration, where the arts are used as a vehicle for satisfying other academic objectives (such as the Alphabet Song for teaching and learning letters), is the most prevalent form of integration. Many classroom teachers view the use of music in specific correlation with other subjects as one of the most important types of music integration [74; 157].

Affective integration involves using the arts to change the moods of individual students or entire classrooms, such as playing relaxing music when students reenter the classroom after lunch, or for creative expression, such as drawing to a piece of recorded music. “Teachers view these types of integration as a way of dismissing the importance of music as part of the core curriculum and treating it superficially, just as a simple form of entertainment” [75].

Bresler [78] indicates that when music is present in a classroom, it is oftentimes used as a way of illustrating subject matter, a break from other subjects, or simply as background music. In doing so, it teaches children to ignore music and prevents them from a “deeper understanding and experience;” thus they do not learn to “regard music as a potential source of knowledge or of emotional or intellectual investment” [77; 79].

Social integration is using the arts to participate in community or school events, such as assemblies. Bresler [79] found that the social function of music is valued more than the other functions used by music specialists. “When there is no music specialist, classroom teachers with the ability to include music in school concerts and programs are seen as invaluable” [81]. “Coequal-cognitive integration recognizes that the arts and core academic objectives have the same level of importance and should be incorporated equally” [74]. Bresler [79] states that this is the least common form of integration because it requires content, specific knowledge, and skills that characterize expert teachers [74]. So as much as the concept of integration is important to arts teachers, she cautions that these different types of integration have different purposes and that music educators tend to favor the coequal-cognitive style [79; 74].

Perkins [144] offers several ideas for classroom teachers to easily implement by themselves and provide additional music-related activities that offer academic benefits without the assistance of a music specialist:

“(a) Inviting musicians into elementary classrooms and preparing students to interview them and ask them about their instruments, training, and careers,

(b) Clapping the syllables of poems and songs, or using claves or percussion instruments,

(c) Scheduling field trips to orchestra concerts and rehearsals and performances of all different kinds of music from folk to opera,

(d) Exposing children to the sounds of the instruments of the orchestra to build musical phonemic awareness whether through recordings or the preferable live instruments and musicians.

(e) Residencies of several weeks because “they can produce the most dramatic results in achievement” [144; 74]

“Because most schools view music as entertainment to fit broader educational goals, music is often marginalized [78], but these types of authentic experiences by professionals in the classroom may be a way for teachers along with their students to “embrace music as a tool of their own” [144; 74]

With the title of pioneer in the field of Music Education in the Republic of Moldova, the scientist Ion Gagim, develops and substantiates specific methods of music education:

- The method of stimulating the imagination - stimulating / mobilizing the imagination through different forms: verbal, visual, auditory, kinesthetic, etc. (Ion Gagim);

- Heuristic method (Gagim. Ion);
- The method of living. The necessary condition for experiencing music is the formation of a certain specificity - the emotional experience after which the student is left under the influence of the process of contemplating the art of music (Gagim. Ion) [24, p.77].

Ways to integrate music in teaching by Merrell [133]:

Active Learning Experiences:

1. Playing background music thematically related to the subject matter while students read a concise summary of essential information can support engagement with the learning content.
2. Incorporating upbeat music into topic-related movement activities or role-playing exercises provides opportunities to reinforce information through physical participation [133].

Concentration, “Focus and Alpha State Learning”:

1. Selected Baroque compositions by Bach, Handel, or Telemann, with tempos ranging from 50 to 80 beats per minute, may create an environment conducive to sustained attention during vocabulary acquisition, factual memorization, and reading. Although this practice has been linked to alpha brainwave activity, claims regarding its neurological mechanisms and effectiveness require empirical support.
2. Lively compositions by Mozart may promote alertness during periods of daytime drowsiness and help students maintain attention while reading or engaging in project-based activities [133].

Memorization:

“Using songs, chants, poems, and raps will improve memory of content facts and details through rhyme, rhythm, and melody” [133].

Attention, motivation, and atmosphere:

“Appropriately selected music may foster a supportive learning environment that encourages students to participate actively in educational activities. It can also positively influence their attitudes toward learning and their motivation to engage with the material. Musical rhythm and tempo may further support the establishment and maintenance of attention” [133].

1. Welcoming and Attention

“Background music is used to provide a welcoming atmosphere and help prepare and motivate students for learning tasks. Music can energize lagging attention levels or soothe and calm when necessary. Simply playing music as students enter the classroom or as they leave for breaks or lunch totally changes the atmosphere” [133].

2. Community Builders

“Music provides a positive environment that enhances student interaction and helps develop a sense of community and cooperation. Music is a powerful tool for understanding other cultures

and bonding with one another. Selecting and playing a classroom theme song, developing a classroom "ritual" --- such as a goodbye or hello time that uses music or other group activities with music are ways to build lasting community experiences" [133].

3. Personal expression:

"Music is the doorway to the inner realms and the use of music during creative and reflective times facilitates personal expression in writing, art, movement, and a multitude of projects" [133].

Creativity and Reflection

"Background music may support cognitive processing, facilitate creativity, and encourage personal reflection. Reflective music, including classical or contemporary solo piano compositions, may help students sustain attention during writing and journaling tasks. One study reportedly found that students produced twice as much written material when listening to music as when working without it" [133].

Personal Expression through the Musical Intelligence

"Musical composition enables individuals to express their thoughts and emotions while fostering musical intelligence through a deeper understanding of rhythm, pitch, and musical form."

- Composing songs related to curricular content enables students to articulate their emotional responses to issues explored through historical events, social studies topics, or literary works [133].

- Creating instrumental soundtracks using simple percussion instruments allows students to represent significant scientific discoveries, emotionally resonant historical events, or narrative action within a novel through sound [133].

Integration of music as a life field:

Music has a connection to many life fields, and it launches to various disciplines. Therefore, the core curriculum in music offers a variety of combinations of social and educational activities. Cross-curricular integration is valuable because of its ability to connect school subject areas with the lives of students [130].

Two aspects, in the same order of ideas, related to music:

- A. Music as a "life field" in his life and at school.

- B. Music as a domain that is linked to different disciplines and knowledge domains taught in school.

Music constitutes an important dimension of school life, contributing to ceremonial practices, supporting collective memory, and facilitating the preservation of cultural heritage. School-based musical activities can promote social inclusion, particularly when they acknowledge the musical traditions students bring from home and foster respect for diverse forms of musical and cultural expression. Participation in these activities can also provide a foundation for informed engagement with cultural works and active participation in cultural life.

Therefore, music integration programs must include a variety of school initiatives that can reflect this position. For example, musical activities and songs in holidays; Creating multi-age groups to play music and sing together; Participation in musical events in school; The establishment of "clubs" for music lovers in different styles (rock, classical, rap) [133].

Some of these initiatives aim for all the students, and some will be based on free choice and voluntary "interest groups", encouraged and supported by the school [113].

The ability, attitudes, and motivation of teachers to use the arts as a tool in their practice is related to their complete education—from childhood arts experiences to preparation in courses, to experiences in the arts and in other subjects [74; 136].

“The value and importance of a music methods class is not always recognized by teachers whose beliefs about the subject area affect their performance as a student and as a teacher” [74; 171].

Researchers found that teachers who have had prior musical experiences as children believe that music is a valuable subject in the school curriculum [73; 75; 26] “but not necessarily as important as other disciplines” [49; 74].

In addition, “the notion that music is a “special” subject along with physical education and art perpetuates low confidence among classroom teachers [74; 104].

Several studies support the case that elementary classroom teachers use music to varying degrees and for multiple purposes from transitions to developing musical appreciation and skills [49; 74].

Examining elementary classroom teachers’ willingness to integrate instructional goals related to music reveals that many elementary teachers are unsure of its function in the overall school curriculum [49; 74].

Battersby and Cave [74] noted that “Ruth Whitelaw investigated the integration of music and the contributions that music makes to English instruction in an exemplary high school English classroom” [74].

Whitelaw found that the teacher used the music because of her own personal background and interests. Her goals were to evoke students' interest, stimulate their thinking, help them make connections between the bits and pieces of information they receive in school, and encourage them to discover meaning and think about what they learn”[74].

Elementary teachers’ efficacy toward integrating music and their personal level of music appreciation play a significant role in what can be accomplished in their classrooms [74]. According to Bandura [67], the belief in our ability to accomplish a certain task or level of performance is very important. “These beliefs govern our choice of action, how we think and

behave, and what we can accomplish” [74]. Therefore, we will participate in those activities in which we feel capable and confident and avoid those in which we do not [67; 74].

Studies have identified a discrepancy between curricular intentions and classroom practice.

Although interdisciplinary integration was a central objective of the intended curriculum, detailed classroom observations revealed that subject areas were taught separately within relatively rigid time allocations.

“This separation was the result of both the parents' pressure for advanced and accelerated academic content and the lack of structures to facilitate collaboration among the specialized teachers in the school” [74].

When teachers lack formal requirements (e.g., guidelines, testing) and materials (e.g., resource books and textbooks) then the integration becomes the teacher's (or the team's) responsibility only and is left to their initiative, imagination, and resourcefulness [74].

“The ability and motivation of teachers to use the arts as a tool in their practice is related to their complete education”- “from childhood arts experiences to preparation in preservice courses, to in-service experiences in the arts and in other subjects” [136]. Preservice teachers' attitudes toward and beliefs about education and the importance of the arts, more specifically, are shaped prior to entering college through an apprenticeship of observation during their own schooling” [124; 59; 127].

Researchers examined the attitudes of pre-service elementary classroom teachers and found that their beliefs about music education reflected childhood experiences in ensembles, group, and private lessons [49; 74; 76]. Those who have had prior musical experiences as children believe that music is a valuable subject in the school curriculum [74; 76; 99] but not necessarily as important as other disciplines [49]. Other preservice teachers surveyed lacked previous musical experiences altogether, whereas others carried with them childhood memories of discomfort with learning how to play an instrument or sing” [53; 74; 154; 165].

Still others bring to the program established beliefs and attitudes, values, and their own sense of teaching effectiveness [169]. Stuart and Thurlow [170] says, pre-service teachers brought to their teacher education program beliefs about teaching and learning that were heavily influenced by their childhood experiences and will persist unless they are challenged [74; 125]. Teacher candidates need to be encouraged to articulate and examine these beliefs so that they do not perpetuate current practices” [74; 125].

Battersby and Cave [74] noted that Elementary education candidates resist singing in methods courses citing both anxiety and a lack of ability based on negative experiences they had as elementary age students in school or at home [53; 74; 154]. A common account is an unpleasant childhood experience that governs their current attitude, which tends to be negative not only

toward their perceived ability as pre-service teachers but also regarding their confidence in performing, such as singing [74]. Apfelstadt [53] states that subjects felt that singing was perceived as a very personal activity and oftentimes cited a feeling of embarrassment or self-consciousness about their singing ability [74].

When commenting on their past musical experiences, subjects in Hennessy's [130] study felt inadequate and noted that they believed an individual needed to be an accomplished performer to integrate music [74].

"Seddon and Biasutti [159] found that non-music specialist teachers judge or compare their informally acquired music skills against those of their music specialist colleagues, thus further reinforcing their perceived inadequacies. This contributes to low levels of confidence, which leads to a "cycle of low expectation" of music goals for both the classroom teacher and her or his students [74; 104].

Several studies support the idea that primary school educators use music in different ways and for different purposes, from transitions to the development of musical appreciation and skills [49]. Examination of the desire of primary school teachers to incorporate music-related training objectives reveals that many future teachers, as well as primary school teachers, are unsure of their role in the general school curriculum [49; 74].

Battersby and Cave state in their research that several studies have been conducted to explore what activities classroom teachers find useful and most likely to implement on their own and within their own classrooms without the assistance of the music specialist [74]. When asked what they found useful or were willing to implement in their classes that they learned in their methods courses, classroom teachers cited teaching activities based on singing, listening, movement, and integration [157]. Saunders and Baker [157] discovered that most elementary classroom teachers indicated that the skills and understanding that they found most useful and practical were those that used music as a supplement to other curricular areas and those that they could use for recreational and transitional periods [74].

The effectiveness of primary school teachers in teaching music and their personal level of appreciation of music play a significant role in what can be achieved in the lesson. According to Bandura [67], effectiveness is the belief in our ability to perform a certain task or level of performance. These beliefs govern our choice of actions, how we think and behave, and what we can accomplish. Therefore, we will participate in those activities in which we feel capable and confident, and we will avoid those in which we do not [67]. It has been found that the effectiveness of a teacher influences a number of student outcomes, including academic achievement [155], musical performance [132] and fear of failure [74; 146].

Stein [168] states that elementary teachers' attitude toward the music program reflects whether or not they place value or importance on music education and that "students also form attitudes based on the values they see reflected in the environment by parents, family, peers, and teachers" [74]. Therefore, it is so important for classroom teachers to positively influence their students' perceptions by their actions [129]. Classroom teachers are crucial in modeling values and establishing music learning as a priority in the basic education of children [168; 74].

Teachers' attitudes can directly affect the number and types of musical experiences teachers provide for their students. According to Barry [73], teachers with negative attitudes about music will not provide students with the same number and quality musical experiences as teachers with positive attitudes and greater self-confidence. She continues to state that the number and types of musical experiences that classroom teachers decide to provide ultimately rests on how secure they feel with a particular musical activity.

Vannatta-Hall [171] explains that teachers' beliefs will not only influence activities that an individual will implement but also the behaviors and the level of effort applied in the wake of perceived difficulty [74]. Teachers surveyed by Giles and Frego [99] felt that if they were unable to sing or perform various musical tasks in class, they were reluctant to do so in their classrooms. Kvet and Watkins [123] identified elementary education candidates' lack of musical background and training as a variable influencing their perceptions of their own success as inhibiting achievement-related behaviors in music [74].

Barr [70] states that classroom teachers who lacked basic knowledge of the arts disciplines and were not comfortable teaching the required skills were unable or unwilling to incorporate them in their curriculum [74].

Teachers who have a low sense of ability tend to "harbor negative feelings about their teaching and possess a narrow perspective on problem-solving and therefore believe that their situation is more challenging than it actually is" [74; 171].

Other studies based on in-service teacher experiences suggest that teachers who perceive that they were inadequately prepared are shown to lack confidence and produce negative attitudes toward their ability to integrate music [73; 159] and are reluctant to take risks and leave their comfort zones because of fear of being judged" [70; 74].

2.3. Theoretical Foundations for the Development of the Pedagogical Model for Integrating Musical Activities into the Teaching of Other Subjects in Primary Education

MPIM refers to the effect of using the Pedagogical Model of Music Integration in Teaching Other Subjects in Primary Education on the attitudes and effectiveness among teachers. After becoming acquainted with and using the Pedagogical Model of Music Integration in Teaching

Other Subjects in Primary Education, teachers will have greater effectiveness in integrating music into the teaching process than before being exposed to the Model. The effectiveness of teachers in the experimental group was much higher after being exposed to the Model on all variable measures. This second hypothesis was found to be true. Teachers reported that they could not integrate music into their teaching. They considered it very difficult and did not use methods of integrating music into their lessons. After being exposed to the Model, they believed that it was not that difficult to integrate music into their lessons and they did in fact integrate music into their lessons. Teachers also said in interviews that although they were exposed to the Model, they were exposed to methods and ways of integrating music into teaching that helped them see that it was not that difficult. Colwell [82] found that after attending a course on implementing music methods, teachers showed improved comfort in their opinion regarding integrating music into the curriculum, yet they demonstrated a low intention to actually integrate it into the curriculum.

Although teachers may meet the objectives of a music integration course, such as developing skills and strategies for integrating music, their confidence and effectiveness will determine whether they will ultimately implement music in their classrooms [51]. The probability that elementary school teachers will integrate music into their classrooms is conditioned by their training and success perceived in methodological courses [54]. Music integration instructors should focus on those musical concepts and activities that future teachers are likely to use in their classrooms—because they believe it is something they can do [54]. As preconceived beliefs increase and attitudes change, future teachers will come to value music and ultimately become our greatest advocates for promoting music in the classrooms of the future [55; 54].

Furthermore, teachers reported that the fact that the music integration Model in subject teaching was formed and built with the subject staff and the fact that the instructor (researcher) was available to guide them in building the Model for the specific subject made them feel more capable and effective in integrating music into their specific subject teaching. Teachers in music integration courses need to develop the ability to integrate music into the classroom [55], confidence in making music [77], and the ability to cultivate positive attitudes through positive experiences [51; 55] by learning in a safe and supportive environment where they feel comfortable publicly sharing and reflecting on their personal beliefs and experiences [54]. Subsistence and social approaches to integration are the styles that general education teachers will choose because they align with dominant school goals. Music educators prefer the co-equal style, even though it is the most difficult to implement, as it requires a new conceptualization of the discipline, which in turn requires a change in the school structure [59; 54].

Music integration is neither an easy nor a quick process. Developing a meaningful integrated curriculum is a complex process in which all stakeholders (teachers, students, parents,

administrators, and the community) must be involved. While it may certainly be useful to study successful programs and models, it is very important to recognize that each school has its own unique culture. Programs that are highly successful in one school may not be appropriate for another [53], so this research suggests that each school should adapt the program to the internal culture of the school and build an integration program that is appropriate for each teaching staff and the school in general.

Furthermore, teachers in the experimental group reported that during exposure to the program, the instructor emphasized the ability to integrate music into teaching for each teacher.

In addition, they said that while applying the suggested methods in the classroom, they found that integrating music into teaching is applicable and they were able to integrate different types of music integration into teaching such as: using songs with content, using background music, asking students to be creative and compose a song or build an instrument, asking students to play or sing a song.

Music integration courses should focus on developing content knowledge, practical experiences and good teaching models so that teachers can increase their effectiveness [79]. According to Woolfolk-Hoy and Burke-Spero [176], teachers with higher teaching effectiveness tend to feel a higher level of satisfaction in their preparation while participating in a methodological circle. If teachers are able to develop higher teaching effectiveness during the course, they will have satisfaction, confidence and the development of skills in the classroom. The more they teach, the more they will improve the above [57; 53; 30].

In the interview, the teachers in the experimental group reported that the most interesting and effective method they found during the Program implementation was integrating music outside the classroom, such as playing music during recess during the day or integrating music into “individual time” outside the classroom or using the school website to integrate music.

Since teachers spend most of their time with their students, their beliefs about music are based on the quantity and quality of music activities they use in the classroom [89]. They have a responsibility to make music learning a strong presence in their curriculum [88], as they have the most consistent influence on their students [85]. According to researchers [54] “opportunities for spontaneous use of music and planning music within other daily curricular activities enhance child learning ... and when the daily inclusion of a song is planned in the curriculum, it acts on individual development as well as on focusing interest” [54].

Teachers in the experimental group did not use music integration extensively before exposure to the Program. Two methods were most commonly used: music with content in integrating music into the lesson, and the second is the use of music at the beginning and end of the lesson. Teachers said that these were the easiest ways to integrate music into their teaching.

Bresler [77] found that most teachers were not comfortable teaching music and that only a few teachers included music as part of their regular curriculum, and singing and listening to music were the most common music activities in the classroom [58].

Teacher effectiveness, in general, was low across the entire research population (except for teachers who had some musical experience) before exposure to the training program. Abril and Gault [49] found that music plays a secondary role in other curricular activities. Malin [129] explains that a number of teachers in the classroom do not take music seriously because they do not consider it an important subject nor do they consider the music specialist as a professional. According to Weller [174], optional subjects were considered auxiliary and were therefore perceived with a devaluing attitude [54].

Despite this finding, the teachers in the experimental group showed very high efficacy and positive attitudes after applying the Pedagogical Model of music integration in the teaching of other subjects in primary education. However, the teachers have many musical abilities and talents, but they do not know about it. Apfelstadt [53] states that the subjects considered singing to be perceived as a very personal activity and, most often, cited a feeling of embarrassment or awkwardness about their singing ability [54].

This is why it is very important to develop teachers' musical talents. Helping teachers understand the value and importance of music in the lives of not only their students, but also themselves, encourages them to apply the knowledge and skills they learn in methodological courses [23]. The difficult task is to assure teachers that they can be successful in such a classroom, despite their fears [74]. Richards [154] states that we must “work to help future teachers develop not only musical skills but also confidence in their own musical abilities and teaching skills ... in a way that does not diminish their musical enjoyment” [99, p. 7].

Unlike the experimental group, the teachers in the control group did not experience a change in their effectiveness. Without being exposed to the Model and applying it, they still feel that they are not able to integrate music into their teaching process.

Improving teacher effectiveness is one of the first steps in developing the right combination of skills, knowledge and attitudes to integrate music into teaching [30]. Many primary school teachers bring a limited musical background and knowledge to the methodological course on implementing music in the classroom, which prevents them from developing the level of teaching effectiveness in integrating music [54; 79].

1. Applying music integration methods - the second step in the Pedagogical Model for integrating music into the teaching of other subjects in primary education:

Subsequently, the teachers learned techniques and methods for integrating music into teaching, they were asked to apply them in their lessons. During their implementation, the

researcher accompanied them. The latter was available for any questions or help. He visited the school three times a week and made sure that the teachers applied the methods and were available in case they needed help.

The principals of two schools decided to use the Pedagogical Model of music integration in the teaching of other subjects in primary education while integrating music into the teaching process. The Model was used in the treatment group (intervention). For each subject, a work plan was developed by the school staff, to include the topics in the subject curriculum. The work plan was formed by each of the specialized subject teachers. The teachers decided to integrate music for one lesson per week. This frequency can be considered intense compared to the frequency with which music integration is usually used in schools.

Characteristics of the Pedagogical Model of music integration into the teaching of other subjects in primary education.

This study formed a Pedagogical Model of music integration into the teaching of other subjects in primary education that is related to 6 main subjects in the school curriculum: Arabic, Hebrew, English, Mathematics, Science and Islamic Religious Education. The suggested methods are not only songs, but a wide range of varied techniques for integrating music into teaching, which were suggested to the teachers in the course, such as using background music, asking students to sing in front of the class and perform or play music on the theme of the lesson and using the combination of music and arts in teaching the lesson, inviting teachers or parents who have musical talent to sing or perform songs related to the material learned in the lesson.

The Pedagogical Model of music integration into the teaching of other subjects in primary education does not tell the school exactly what to do and what activity to use in the lessons. The Pedagogical Model suggests that music integration staff and teachers should sit down and develop a lesson plan using the suggested ways of integrating music. The Pedagogical Model of music integration into the teaching of other subjects in primary education suggests a working method that contains the basic criteria for integrating music into teaching.

It was suggested that music integration should be not only in the classroom, but also at break time, in the morning when students come to school with the homework done at home, or virtual lessons via the Internet. Integration should go beyond the classroom and exist in the student's daily life.

In addition, the Model of music integration suggested in this research offers methods that encourage higher levels of thinking, such as the development of creativity. It is suggested not only to use it at the first low level of information, but also at advanced levels of creativity.

Furthermore, the Pedagogical Model of music integration in the teaching of other subjects in primary education works on the involvement of talented teachers and parents in the integration

of music into the teaching process. Parental intervention in the students' school life is highly advisable when it comes to learning and educating students.

The Pedagogical Model of music integration into the teaching of other subjects in primary education emphasizes the importance of empowering and encouraging teachers so that they can integrate music into their teaching, in order to increase the teacher's sense of efficacy in integrating music into teaching.

The suggested Model places a major significance on the processes of evaluation and monitoring of the implementation of the Model in the school. This approach suggests that without continuous monitoring and follow-up of the school projects, it will not succeed.

Furthermore, great attention is paid to peer learning with observations of music lessons integration by the teachers of the same subject. For example, a mathematics teacher integrates music into his lesson while the team of mathematics teachers observe his lesson. This opens up a possibility of joint learning through feedback on the lesson.

This research highlights the issue of integrating music into the teaching process and examines the attitudes and effectiveness of Israeli teachers towards musical cooperation.

The Pedagogical Model (see figure 1) is formed and exposed to teachers and principals in school meetings. The Model includes the following basic lines:

1. Exposure to music integrating values and benefits.
2. Exposure to various ways and methods of integrating music into teaching. Integrating music not only in the classroom.
3. Personal support and guidance from a professional team. They are not alone, they can be helped by the music teacher.
4. Development of a school plan and an adjusted professional model with the school principal and the disciplinary professional team.
5. Empowering and encouraging teachers that it is not difficult and they can do this.

The Pedagogical Model of music integration into the teaching of other subjects in primary education was developed according to the specificity of the field of education. It provides the school with a framework in which music integration into the teaching process can be used. The Pedagogical Model of music integration into the teaching of other subjects in primary education does not tell the school what exactly it should do and what activity it should use in class. The Pedagogical Model suggests that music integrators and teachers should sit down and develop a lesson plan using the suggested ways of integrating music. The Model suggests a working method that contains the basic criteria of music integration into teaching.

This figure represents the Pedagogical Model of music integration into the teaching of other subjects in primary education and contains all its important components.

In this context, we propose several **axiological, epistemological, and praxiological foundations** of the research aimed at developing students' sense of beauty in relation to the spirit of music. These foundations contribute to raising awareness of both national values specific to Israel (the Arab sector) and universal human values related to the psychology of musical art, based on the following principles:

- **The learner-centered paradigm** – the personality of the educated individual represents the central focus of the pedagogical process.
- **The axiological (value-based) paradigm** – the integration of musical values as an essential component in personality development.
- **The interdisciplinary/transdisciplinary paradigm** – music is integrated into the teaching of other disciplines rather than being treated as an isolated field.

The **pedagogical model for integrating music education into primary education** is grounded in a set of modern educational paradigms that reflect the current orientation of educational sciences toward the development of an autonomous, creative, and critically reflective personality. Among these, the following are emphasized: the learner-centered paradigm, the axiological paradigm, and the interdisciplinary and transdisciplinary paradigm, together with specific pedagogical principles, factors, and conditions.

The study explicitly identifies the following implementation conditions:

- **Activation of the process of developing musical competence** within integrated teaching and learning activities;
- **Axiological and pedagogical approaches to integrating musical activities** into the teaching of other subjects in primary education;
- **Capitalization of the formative potential of musical art** – recognizing the educational value and developmental possibilities of music;
- **Institutional and professional support** – ensuring guidance and assistance from a professional team coordinated by a specialized instructor;
- **Development and adaptation of a systematic plan** for integrating musical activities into the school environment;
- **Continuous monitoring and evaluation** of the integration process.

Within the analytical framework adopted, the following **criteria of integrality** are formulated [9, p. 10]:

- identifying the causes and conditions that make integrality possible;
- clearly determining the relationships among the constituent elements of integrality;
- examining the effects both at the level of the whole and at the level of its component elements;

- considering the whole as a principle preceding its parts; moving from the whole toward the parts ensures a deeper understanding;
- viewing the whole as the foundation of the possibility of its form and as the basis for establishing relationships among parts that depend on this form.

When discussing **integrality**, it is necessary to consider that its realization requires the manifestation of the following factors:

- **An integrating environment** – a totalizing construct that enables the unification of two or more elements into a coherent whole;
- **The integrating system** – the system within which integration takes place;
- **The integrative system** – the elements that are being integrated;
- **A stimulus of integration / integrating element** – a stimulating factor that enables the unification of elements and belongs to the same environment; the agent responsible for integration;
- **Common elements** that make the process of unification possible;
- **Integrative potential** – the relationships established among the constituent elements [26, p. 110].

The integration of music is based on a clearly defined set of **pedagogical principles**:

- **The principle of internalization of values** – the adoption of a system of values as personal values, integrated into the structure of personality;
- **The principle of affective, motivational, and character engagement** – continuous adaptation to the conditions of an open pedagogical context;
- **The principle of complementarity** – maintaining a balance between cognitive and non-cognitive objectives in the design of pedagogical activities;
- **The principle of integrality** – a key principle in assessing transdisciplinary competencies in primary education;
- **The principle of learner personality-centeredness** – the student/the assessed individual represents the central reference point of the educational process.

Conditions for the Integration of Music Education into the Teaching Process

The integration of music education within teaching activities in primary education requires the creation of a coherent pedagogical framework that capitalizes on the formative potential of musical art and contributes to the holistic development of students' personalities. Specialized literature emphasizes that achieving effective integration between different curricular domains depends on the existence of well-defined pedagogical, institutional, and methodological conditions (Cerghit, 2006). In this regard, the pedagogical model for the integration of music education is based on a set of conditions that ensure the functionality and effectiveness of the educational process [12].

The first essential condition is the **activation of the process of developing musical competence within integrated teaching**. This involves the use of instructional strategies that stimulate students' active participation in various musical activities, such as active listening, vocal performance, improvisation, and musical creativity activities. Through these experiences, students do not merely acquire information about music but develop artistic competencies, expressive abilities, and aesthetic sensitivity. As research in the field of music education emphasizes, students' direct involvement in musical experiences contributes to the development of auditory thinking and creativity (Gordon, 2007).

The second important condition refers to **axiological and pedagogical orientations regarding the integration of musical activities into the teaching of other primary school subjects**. The integration of music education should not be implemented randomly or superficially; rather, it must be grounded in a clear pedagogical vision that recognizes the formative role of musical art. In this context, music can be used as an educational tool for facilitating learning in other disciplines, contributing to the development of students' linguistic, cognitive, and socio-emotional competencies. According to Basarab Nicolescu, a transdisciplinary approach to education involves overcoming disciplinary boundaries and establishing meaningful connections among different fields of knowledge (Nicolescu, 2002).

Another fundamental condition is the **capitalization of the formative potential of musical art**. Music has the capacity to influence students' emotional, cultural, and social development, contributing to the formation of aesthetic sensitivity and the consolidation of cultural identity. Musical activities can stimulate imagination, creativity, and cooperation skills while simultaneously creating a favorable educational environment for learning. In this context, music education becomes an important means of cultivating cultural and aesthetic values, contributing to the harmonious development of personality.

An essential condition for implementing the integration model is **institutional and professional support**. The integration of music education requires collaboration among teachers, music education specialists, and decision-makers within the educational institution. Methodological support provided by specialized instructors or mentors contributes to the development of teachers' pedagogical competencies and to improving the quality of instructional activities. Furthermore, continuous professional development of teachers in the fields of arts education and integrated pedagogy represents an important factor in ensuring the effective implementation of the educational process.

Another important condition is the **development and implementation of a systematic plan for integrating musical activities into the educational activity of the school**. This plan should include clearly defined educational objectives, implementation strategies, appropriate teaching resources, and methods for evaluating outcomes. Systematic planning enables the coherent

organization of educational activities and facilitates collaboration among teachers involved in the integrated teaching process.

At the same time, the integration of music education requires **continuous monitoring and evaluation of the implementation process**. Assessment should address both students' learning outcomes and the effectiveness of the teaching strategies employed. Through regular analysis of educational activities, difficulties encountered during implementation can be identified, and solutions can be developed to optimize the integration process.

It can be concluded that the effective integration of music education into the pedagogical process depends on respecting a set of pedagogical, institutional, and methodological conditions. The activation of musical competence development, the axiological foundation of integration, the capitalization of the formative potential of musical art, institutional and professional support, systematic planning, and continuous monitoring represent essential elements for developing an efficient and integrative educational model. By observing these conditions, music education can become an important factor in students' holistic development and in strengthening the cultural and value-oriented dimension of the educational process.

The figure below presents the Pedagogical Model for the Integration of Musical Activities and includes all of its essential components.

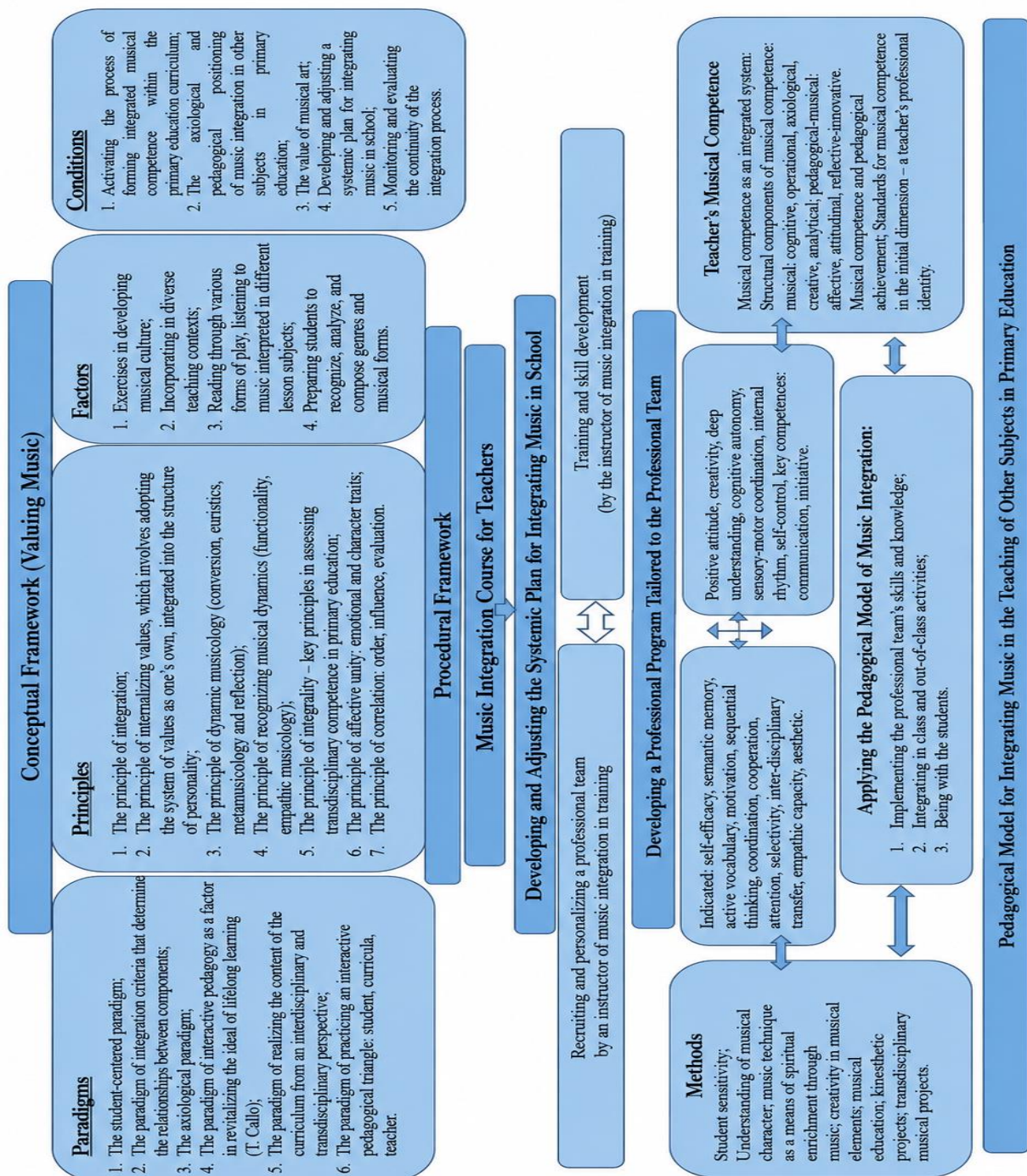


Figure 1. Pedagogical Model of Music Integration into the Teaching of Other Subjects in Primary Education

From a conceptual perspective, a **pedagogical model** represents a scientific framework that describes and explains the relationships among the components of the educational process while providing guidelines for the effective organization and implementation of learning activities. In the context of musical activities, the model capitalizes on the educational potential of music to foster the cognitive, affective, social, aesthetic, and moral development of primary school students.

The **pedagogical model for integrating musical activities** establishes coherence among:

- the objectives of music education and the key competencies specified in the curriculum;
- musical content and the developmental characteristics of primary school learners;
- interactive teaching methods and authentic musical experiences; and
- the assessment of students' artistic and personal development.

The effective implementation of the pedagogical model requires the fulfillment of several essential conditions to ensure coherence and sustainability. These include:

- Activation of musical competence development within integrated teaching through interactive methods (listening, performance, improvisation, creation).
- Axiological and pedagogical orientations that ensure systematic contribution of music to the objectives of other subjects.
- Capitalization of the formative value of musical arts for emotional, social, and cultural development.
- Institutional and professional support, including collaboration with music specialists and continuous methodological guidance.
- Development of a systematic school plan and continuous monitoring of the integration process.

Within this model, musical activities are not viewed solely as means of developing artistic competencies but also as educational tools with broad formative value. Through vocal and instrumental performance, music listening, musical games, movement to music, and creative artistic activities, students develop aesthetic sensitivity, communication skills, creativity, emotional self-regulation, cooperation, and respect for cultural values.

The structure of the model comprises the following components:

- **Teleological component** – the aims and objectives of education through musical activities;
- **Conceptual component** – the pedagogical, psychological, and musical principles that underpin the integrated educational process;
- **Curricular component** – the content and specific competencies of music education;
- **Methodological component** – the methods, techniques, forms, and instructional resources used to implement musical activities;
- **Operational component** – the organization and implementation of musical activities;
- **Evaluation component** – the criteria, indicators, and assessment instruments used to evaluate learning outcomes.

Therefore, the **pedagogical model for the integration of musical activities in primary education** represents an integrated system for organizing and implementing the educational process through music. It is aimed at developing students' musical competencies as well as the intellectual, affective, social, moral, and creative dimensions of their personalities, in accordance with the objectives of contemporary education.

Explanation of the Pedagogical Model of Music Integration into the Teaching of Other Subjects in Primary Education:

First, teachers attended a “music integration course” in which they were introduced to all the integration methods they should use in the teaching process, as previously described.

The second step was to create a leadership team (including the coordinators of each subject) that developed a work plan for integrating music in the school. The music teacher was involved and the whole process was supervised by the author of this research.

The third step was for each coordinator of each subject to develop a professional program with the disciplinary team: Arabic, English, Hebrew, Mathematical Science and Religion. The programs included suggestions that the researcher gave to the team. And all programs included all the ways of integrating music examined in the research.

These first three steps of “integrating the music course”, “developing a school work plan” and “developing a professional program with the disciplinary team” intend to provide teachers with a higher sense of efficacy and more positive attitudes towards integrating music in teaching.

The fourth step was the **application of the music integration program** by each teacher to their lessons. Teachers applied the following methods to their lessons:

using background music, content songs, creativity, music outside the classroom, external talent, performance, music and arts, music at the beginning and end of the lesson.

The application of music integration included integration during and outside the classroom. It also involved **the talents of teachers and parents**. And it included an accompanying website.

Throughout this process, the music integration instructor, who is the author of this research, accompanied the team to provide them with personal support and guidance, as well as encouragement and empowerment that they can succeed.

Two development mechanisms were used to help teachers learn from the experience gained from this process. Teachers were asked to invite their peer group of teachers from the same subject they taught to observe the music integration lesson they were teaching. Peer observation is a great opportunity for teachers to learn from and inspire each other. In addition, the music integration instructor (the author of this research) monitored and evaluated the process every week.

The Pedagogical Model of music integration into the teaching of other subjects in primary education is written in a common standard approved by the Israeli Ministry of Education and is addressed specifically to school teachers, using a professional language they are familiar with. This makes the Model very functional for teachers and schools.

The Pedagogical Model of music integration into the teaching of other subjects in primary education is written in a very detailed way so that teachers and school principals can use it easily.

The Pedagogical Model of music integration into the teaching of other subjects in primary education is holistic and includes many dimensions that could be beneficial for the student during

the process of learning. Integrating music into the teaching process can be of great help to students in several dimensions:

1. It contributes to the emotional state of the student while learning (reduces anxiety and stress, increases self-confidence).
2. It also contributes to students' social aspect while learning. It improves the relationship between students and their teacher.
3. It also increases the student's motivation.
4. It also contributes to the cognitive aspect, such as understanding and internalizing the material, memorizing it.
5. It also contributes to increasing achievements.
6. It also helps the student in the behavioral aspect and disciplinary problems.
7. It also helps the teacher in classroom management.
8. It also helps the student improve their motor skills, such as fine motor skills, and gross motor skills.

The dimensions that benefit from integrating music into teaching are *Emotional, Social, Cognitive Learning Effect, Motivation, Motor Effect, Behavioral Effect, Achievements, Classroom Management, General Personal Attitudes*.

Furthermore, the suggested Model emphasizes the importance of conducting a course for teachers who intend to focus on the following:

1. Benefits and value of integrating music into teaching.
2. Ways and methods of integrating music into teaching.
3. Empowering and encouraging teachers that they are capable of implementing it.

In this research, the Pedagogical Model of music integration into the teaching of other subjects in primary education was applied in the classroom. This Model included many integration modalities and many elements considered important for teacher attitudes and effectiveness, such as the involvement of teacher and parent talents, the integration of music in and out of the classroom, the accompanying website. Furthermore, this Model included supporting factors, such as the application of music integration tools for the teacher, encouragement and empowerment from an instructor, personal support, and the guidance of a professional team. These different elements and factors helped to examine a wide range of interactive factors, which influence the effectiveness of an intervention, as well as its unintended consequences.

After the formative experiment in this research, the Model was adapted. It was found that personal support alone is not effective, teamwork and team support are needed. Thus, this element was added. Furthermore, we realized during the formative experiment that music integration in the classroom is not enough and that music integration outside the classroom is required. Furthermore,

we realized that the introduction of an embedded Program arouses a lot of resistance from teachers. That is why it was decided to build an adjusted Program with a team of professionals.

The education process refers to both mental and character formation, as well as contents and disciplines. The formative value of the Pedagogical Model of music integration into the teaching of other subjects in primary education that was carried out in school is as important as - if not more important than - the actual content of the Pedagogical Model.

Different disciplines can contribute to the development of complementary cognitive and personal capacities.

Mathematics fosters logical reasoning, precision, and accuracy; history encourages judgment, discernment, and prudence; and literature cultivates sensitivity to human experience. Calligraphic practice may develop concentration, accuracy, patience, and perseverance, while reinforcing attention to spelling and the care required to produce high-quality work.

In conclusion, we can highlight the nine dimensions of teachers' attitudes and eight dimensions of teachers' effectiveness towards music integration. All parameters show a positive correlation between music education and teachers' experience - and their effectiveness and attitudes towards music integration into teaching.

This hypothesis was significantly proven. Teachers who had previous music education had more positive attitudes and greater effectiveness regarding music integration into teaching.

Teachers in the experimental group with musical experience had more positive attitudes than teachers who did not have musical experience before exposure to the Pedagogical Model of music integration into the teaching of other subjects in primary education.

This finding is logical, because the teachers who had musical experience could see the effectiveness of integrating music into their teaching. They also felt more able to apply something they were familiar with and already knew.

Researchers have found that the teachers who had musical experiences in their childhood considered music to be a valuable subject in the school curriculum [55].

*This finding highlights the major importance of providing courses and implementing the Pedagogical Model of music integration into the teaching of other subjects in primary education in the teaching of school teachers.

2.4. Core Program in Music Education

The Program of integrating music into the context of teaching subjects in primary education

Objectives: To receive, understand and accept the message; To comment on the text under different aspects of the textbook; To reveal the characteristics of the musical beauty of the text; To argue the role of beauty in the development of personality.

Formative objectives:

- To demonstrate sensitivity when listening to an artistic text;
- To read a known painting correctly, consciously, fluently and expressively;
- To cultivate artistic sensitivity through reading images;
- To recognize accessible literary genres – fable, tales story, poetry;
- To distinguish the traditional attire of different regions and locations in Israel;
- To know national customs and traditions;
- To become familiar with the diversity of the character of music and its corresponding expressive content
- To master a wide variety of songs and games from children's folklore;
- To identify and characterize in general terms the elements of musical language used in concrete creations heard or performed, applying the musical terms themselves;
- To know a wide variety of folk songs and games, their characteristics.

The priorities of the Program of music integration in primary education

The National Association for Music Education has established standards outlining key competencies in music education. The nine National Standards for Music Education presented here encompass performance, creative expression, musical literacy, critical evaluation, and contextual understanding:

- ✓ Performing a varied vocal repertoire independently and collaboratively.
- ✓ Performing a diverse instrumental repertoire individually and in ensembles.
- ✓ Improvising melodies, variations, and accompaniments.
- ✓ Composing and arranging music within specified guidelines.
- ✓ Reading and producing musical notation.
- ✓ Listening attentively to music and analyzing and describing its characteristics.
- ✓ Evaluating musical works and performances.
- ✓ Exploring relationships between music, other artistic forms, and disciplines beyond the arts.
- ✓ Making sense of music in light of its historical and cultural background

Planning applications by teachers

The human capacity to engage with music enables intuitive musical expression and appreciation, even in the absence of formal instruction. Individuals can communicate through

sound, respond to musical stimuli, and derive enjoyment from musical experiences without prior musical training. Within the curriculum, music can function both as an independent discipline and as an interdisciplinary resource, encompassing three principal dimensions: cognitive-psychological, social, and creative.

Music's close relationship with emotional experience allows it to serve as a medium for reflecting on internal feelings and communicating emotions outwardly. It can also function as a mode of thought and a means of expressing ideas, with individuals' capacity to use it for these purposes developing through continued engagement and experience.

With the title of pioneer in the field of Music Education in the Republic of Moldova, the scholar I. Gagim, elaborated and substantiated specific methods of music education: *the method of stimulating imagination* – stimulating/mobilizing imagination through different forms: verbal, visual, auditory, kinesthetic, etc.; *the heuristic method*; *the method of experiencing*. the necessary condition for the emergence of experiencing music is the formation of a certain specific - emotional experience as a result of which the student leaves himself under the influence of the process of contemplating musical art (Gagim. I.) [28, p.77].

Ways to integrate music into teaching according to A. Merrell [133]:

Active learning experiences: 1. Playing music associated with the learned topic in the background while reading a concise summary of the essential information. 2. Physically activating the information, playing cheerful music during a movement activity or a role-playing game [133].

Concentration, Focus, and the Alpha State of Learning: 1. Play baroque music, such as that composed by Bach, Handel, or Telemann, which is 50 to 80 beats per minute, to create a focus atmosphere that causes students to concentrate deeply in the alpha brainwave state. Learning vocabulary, memorizing information, or reading to this music is extremely effective. 2. Energizing Mozart music helps to attract attention during daytime naps and helps students stay focused while reading or working on projects [144].

Memorization: “The use of songs, chants, poems, and rap will improve memory for content information and details through rhyme, rhythm, and melod” [144].

Attention, motivation, and atmosphere: “Certain music will create a positive learning atmosphere and help students feel welcome to participate in the learning experience. In this way, it has a special effect on students' attitudes and motivation. The rhythms and tempo of musical sound can help us establish and maintain our attention” [144].

a. Friendly atmosphere and attention: “Background music is used to provide a friendly atmosphere and to help prepare and motivate students for learning tasks. Music can energize low attention levels or soothe and calm when needed. Simply playing music as students enter the classroom or as they leave for break time or lunch can completely change the atmosphere” [144].

b. Community builders: “Music provides a positive environment that enhances student interaction and helps develop a sense of community and cooperation. Music is a powerful tool for understanding other cultures and connecting with each other. Selecting and playing a song in class, developing a “ritual” in the classroom – such as a musical goodbye or greeting moment, or other music-assisted group activities are ways to build lasting community experiences” [144].

c. Personal Expression: “Music is the doorway to inner realms, and the use of music during creative and reflective periods facilitates personal expression in writing, art, movement, and a multitude of projects” [144]

Creativity and Reflection: “Background music may support cognitive processing, foster creativity, and encourage personal reflection. Contemplative music, including classical or contemporary solo piano compositions, may help students sustain attention during writing tasks for longer periods than when working without music. One study reportedly found that students produced twice as much written material when listening to music as when writing without it.” [88].

Personal Expression Through Musical Intelligence: “Creating music expresses inner thoughts and feelings and develops musical intelligence through an understanding of rhythm, tone, and form”.

- Writing content-related songs allows students to express feelings about issues raised by historical incidents, social studies topics, or literature [144].

- Learners can also build an instrumental "score" with simple rhythm instruments that conveys through sound a landmark scientific discovery, a traumatic moment in history, or the events of a story. [144].

Music integration as a life field: Music is related to many areas of life and projects itself into various subjects. Therefore, the core music program offers varied combinations of social and educational activities. Cross-curricular integration is valuable because of its ability to connect school subjects with students' lives [142].

Two aspects, in the same vein, related to music:

- Music as a “life field” in one’s life and at school.
- Music as a field that is related to different subjects and areas of knowledge taught in school.
- Music as a life field is an important component of school ceremonies and is used as a “memory aid” and a tool for preserving cultural heritage. Music-social activities in school can be used as a tool for social integration, especially when they take into account the musical traditions that students bring from home and respect for any musical-cultural expression.

Musical activity in school can be a basis for education for cultural consumption and participation in culture.

Therefore, music integration programs should include a variety of school initiatives that can reflect this position. For example, musical activities and songs during holidays; creating age-

groups to play music and sing together; participation in musical events in school; setting up “circles” for music lovers in different styles (rock, classical, rap) [144].

Some of these initiatives are intended for all students, while others are based on voluntary participation through **interest groups**, encouraged and supported by the school [130].

Table 2.1: School Work Plan

School Work Program for the Integration of Music in Teaching – **MPIM (Pedagogical Model for the Integration of Music)**

Objective: Integration of music in the teaching of core subjects

Allocated Hours for Mission Implementation	Partners who will Carry out the Task	Responsible for Task Monitoring	Completion Date of Each Stage	Start Date of Each Stage	Main Actions to be Implemented (Organizational Stages)	Success Measurement	Target Population	Mission
Methodological-organizational activities “Ofek Hadash”, additional hours – “Ofek Hadash”	Management team, discipline coordinators team, teachers of core subjects, 3rd and 4th grade pupils	Program instructor – Belal Badarna (researcher, lecturer at Levinsky College of Education, music teacher, educator and coordinator)	June July September	June July September	- Recruitment of the school principal. - Establishment of a management team for music integration. - Recruitment of teachers and parents with musical abilities, talent or experience. - Recruitment of the social education coordinator. - Conducting individual meetings with discipline coordinators to determine the guidelines for program implementation. - Completion of initial questionnaires to obtain a comprehensive picture of teachers’ attitudes and self-efficacy regarding music integration in teaching.	At least 80% of the teachers of core subjects in 3rd and 4th grades will apply the work plan for music integration.	Management team, discipline coordinators team, teachers of core subjects, 3rd and 4th grade pupils	Integration of music in the teaching of the six core subjects: Arabic, Hebrew, English, Mathematics, Science, Religion. Integration of music in the classroom and outside the classroom.

Allocated Hours for Mission Implementation	Partners who will Carry out the Task	Responsible for Task Monitoring	Completion Date of Each Stage	Start Date of Each Stage	Main Actions to be Implemented (Organizational Stages)	Success Measurement	Target Population	Mission
Methodological-organizational activities “Ofek Hadash”, additional hours – “Ofek Hadash”	Management team, discipline coordinators team, teachers of core subjects, 3rd and 4th grade pupils	Program instructor – Belal Badarna (researcher, lecturer at Levinsky College of Education, music teacher, educator and coordinator)	September October November	September October November	- Conducting two planning meetings to establish actions, success parameters and supervision methods. - Conducting 10 sessions (one course) with a team of teachers of core subjects to expose them to the benefits and methods of music integration. - An important objective within the meetings is to encourage teachers to increase their self-efficacy.	Teachers’ attitudes and self-efficacy will be higher for at least 80% of the teachers of core subjects in 3rd and 4th grades.	Management team, discipline coordinators team, teachers of core subjects, 3rd and 4th grade pupils	Integration of music in the teaching of the six core subjects: Arabic, Hebrew, English, Mathematics, Science, Religion. Integration of music in the classroom and outside the classroom.

Allocated Hours for Mission Implementation	Partners who will Carry out the Task	Responsible for Task Monitoring	Completion Date of Each Stage	Start Date of Each Stage	Main Actions to be Implemented (Organizational Stages)	Success Measurement	Target Population	Mission
Methodological-organizational activities “Ofek Hadash”, additional hours – “Ofek Hadash”	Management team, discipline coordinators team, teachers of core subjects, 3rd and 4th grade pupils	Program instructor – Belal Badarna (researcher, lecturer at Levinsky College of Education, music teacher, educator and coordinator)	November January	November January	- Conducting weekly meetings with the team of discipline coordinators with the support of the instructor to elaborate the work plan. - Development of didactic projects. - Application of music integration in lessons – once per week. - Formulation of a series of observations in music-integrated lessons; teachers of specific subjects observe music integration in the subject they teach. - Conducting evaluation meetings every two months with the management team to assess the implementation of the program.	At least 70% of pupils in the “focus group” report that music integration in teaching had an effect on them.	Management team, discipline coordinators team, teachers of core subjects, 3rd and 4th grade pupils	Integration of music in the teaching of the six core subjects: Arabic, Hebrew, English, Mathematics, Science, Religion. Integration of music in the classroom and outside the classroom.

Allocated Hours for Mission Implementation	Partners who will Carry out the Task	Responsible for Task Monitoring	Completion Date of Each Stage	Start Date of Each Stage	Main Actions to be Implemented (Organizational Stages)	Success Measurement	Target Population	Mission
Methodological-organizational activities “Ofek Hadash”, additional hours – “Ofek Hadash”	Management team, discipline coordinators team, teachers of core subjects, 3rd and 4th grade pupils	Program instructor – Belal Badarna (researcher, lecturer at Levinsky College of Education, music teacher, educator and coordinator)	March April May June	March April May June	- Application of music integration outside the classroom (within the morning program, during active breaks, informal activities and in the schoolyard). - Application of music integration through talented teachers and parents. - Completion of questionnaires regarding teachers’ attitudes and self-efficacy concerning music integration in teaching to observe the differences. - Conducting interviews with teachers who carry out final evaluation meetings with the management team and teachers from 3rd and 4th grades.	In the interviews, at least 80% of teachers indicated that music integration in teaching is beneficial.	Management team, discipline coordinators team, teachers of core subjects, 3rd and 4th grade pupils	Integration of music in the teaching of the six core subjects: Arabic, Hebrew, English, Mathematics, Science, Religion. Integration of music in the classroom and outside the classroom.

Structured components of the program:

• Music integration course, including the methodology of music integration into the teaching process; • Leadership and coordination team; • Work plan and professional teaching program.

Objectives:

1. Increasing students' motivation in studying the subject;
2. Developing cognitive activity in the classroom;
3. Facilitating students' understanding of the studied phenomena;
4. Comparing facts from different fields of knowledge;
5. Developing students' opportunities for music integration.

The teachers were asked to apply these integration methods into their lessons, to feel capable of doing so and thus to increase the effectiveness of teachers. The course consisted of 7 sessions. Each session focused on presenting teachers with an integration method. The methods were presented in detail during the course. The integration methods presented in the course are the same methods that the teacher applied in the lessons.

Training sessions were organized to prepare teachers for the implementation of the Pedagogical Model for the Integration of Musical Activities (PMIMA / MPIM). The overall theme of the program was the integration of musical activities in various educational contexts. Participation in these sessions provided teachers with both professional and psycho-emotional benefits. They strengthened their pedagogical potential, educational practice, professional competencies, instructional opportunities, and openness to broader approaches to knowledge acquisition and teaching.

The proposed methods of musical integration included: the use of background music; content-based songs; musical creativity; music outside the classroom; external talent; musical performance; the integration of music with the arts; opening and closing lesson music.

Session 1. Integrating Musical Activities into Primary School Teaching: Benefits and Educational Value

During this introductory session, teachers became familiar with the educational benefits of integrating musical activities into classroom teaching. These benefits included:

- improving students' emotional well-being during learning by reducing anxiety and stress while increasing self-confidence;
- enhancing students' social development by fostering empathy, improving teacher-student relationships, and increasing motivation;
- supporting cognitive development through improved comprehension, internalization, and retention of learning materials;

- improving academic achievement;
- supporting positive classroom behavior and discipline;
- assisting teachers with classroom management.

Session 2. Integration Through Background Music

Teachers were introduced to strategies for integrating background music into classroom instruction. The specific benefits and applications of this approach were discussed. Background music primarily promotes students' concentration and relaxation.

Several types of background music were recommended:

- Classical music (e.g., Mozart, Beethoven);
- Nature sounds (water, birdsong);
- Relaxing jazz music.

Teachers were invited to experience the effects of background music themselves. During the workshop, they completed a task while background music was playing and subsequently shared their experiences, feelings, and perceptions of its impact.

Session 3. Integration Through Content-Based Songs

Teachers were introduced to a variety of curriculum-related songs for different school subjects and languages. Several songs appropriate to each subject area and curriculum topic were recommended, some of which were written and composed by the researcher.

The benefits and instructional applications of content-based songs were presented. Such songs primarily help students expand their vocabulary, improve memory, and facilitate learning.

Examples included:

- *Arabic* — "A Beloved Girl" / "a valued girl", "A Village in the Valley" / "a village in a valley", "Our Fields" / "our fields".

- *Hebrew* — "Two Friends", "The Fig Tree".

- *English* — "The Ant and the Grasshopper", "Old MacDonald" / "old man McDonald", "The Wheels on the Bus". English teachers were also encouraged to use the content songs already included in the Click English textbooks.

- *Mathematics* — "The Angels' Song", "The Geometric Shapes Song", "The Multiplication Song". Hand-clapping activities were additionally recommended to reinforce counting, number concepts, and numerical sequences.

- *Science* — "The Electricity Song", "The Metals Song", "The Solar System".

- *Religious Education* — "Eid al-Adha" / "the holidays of Al-Adha", "Ramadan", "Our Prophet Muhammad".

For religious education, songs were selected with particular care. Melodies had to remain very simple and could not include musical instruments other than percussion, in accordance with Islamic tradition. Furthermore, Qur'anic verses could not be adapted into songs, as this is not considered acceptable within Islam.

Session 4. Integration Through Musical Creativity

Teachers explored ideas for incorporating musical creativity into classroom instruction and learned about its educational benefits. Musical creativity helps students internalize learning content while strengthening memory and facilitating learning.

Teachers were invited to compose simple melodies based on words or texts related to their lessons. Most participants successfully created melodies or adapted existing musical ideas using vocabulary connected with the lessons they taught. Their experiences and classroom implementation were discussed during the following training session.

Science and mathematics teachers were also encouraged to incorporate creativity by having students construct simple musical instruments to support learning. Examples included measuring materials to build instruments or exploring how pitch changes depending on the material and the length of a string.

Session 5. Integration Through Music Outside the Classroom

Teachers explored strategies for using music beyond the classroom to support learning. Suggested ideas included:

- playing curriculum-related songs before the school day begins;
- playing music during recess;
- using music during school events and professional development days;
- integrating music through school websites.

These approaches were intended to increase students' motivation by breaking routine and demonstrating the relevance of classroom learning to real-life contexts. Teachers were encouraged to suggest additional ideas and proposed, among others, the creation of a school radio station.

Session 6. Integration Through Musical Performance

Teachers were introduced to the educational use of musical performance. Performing music helps students internalize learning content, strengthens memory, increases motivation, and facilitates learning.

Teachers themselves participated in musical performances by singing simple songs during the workshop. They reported feeling encouraged and empowered by the experience, which increased their confidence in integrating music into their own teaching. Their classroom experiences were discussed during the following session.

Science and mathematics teachers were encouraged to perform curriculum-related songs, including: "The Electricity Song", "The Metals Song", "The Seed", "The Solar System", "The Angels' Song", "The Geometric Shapes Song", "The Multiplication Song".

This method of musical integration demonstrated numerous positive effects on learning.

Integration Through Music and the Arts

Teachers explored ways of combining music with other art forms. Examples included integrating drama and music around lesson content or important ideas from literary texts. Teachers selected material from their own curriculum, created short dramatic performances, and incorporated songs into them. Another example involved combining drawing and music to illustrate the main idea of a lesson or text.

This approach was shown to help students internalize learning content while improving memory and facilitating understanding.

Using Music at the Beginning and End of Lessons

Teachers were introduced to songs from various languages and subject areas suitable for opening and closing lessons. These songs typically included greetings, expressions of goodwill, farewells, and words of thanks.

Such songs enrich students' vocabulary, increase motivation and emotional engagement, strengthen memory, and facilitate learning while simultaneously supporting effective classroom management.

Suggested examples included: "Hello, My Science Teacher", "We Had a Wonderful Lesson" / "we had a nice lesson", "Greetings to My Beloved Lesson" / "hello my beloved lesson", "Thank You, Thank You".

Session 7. Conclusions and Reflection

The final session provided a review and synthesis of the major ideas presented throughout the course. Teachers reflected on their learning experiences and discussed how participation had influenced their teaching.

Participants reported highly positive attitudes toward the course. They stated that the sessions encouraged them to integrate music into their lessons, increased their sense of empowerment, and strengthened their confidence in using methods for integrating musical activities into classroom teaching.

Implementation of the Musical Integration Methods: The Second Stage of the PMIMA / MPIM

Following the training program, teachers began implementing the musical integration methods in their own classrooms. Throughout the implementation phase, the researcher provided

continuous support and guidance. The researcher remained available to answer questions and visited each participating school three times per week to monitor implementation and assist teachers whenever necessary.

The principals of two participating schools decided to adopt the Pedagogical Model for the Integration of Musical Activities (PMIMA / MPIM) as the official framework for integrating music into classroom instruction. The model was implemented within the experimental (intervention) group / treatment group.

For each subject area, the teaching staff collaboratively developed a work plan aligned with the curriculum. Subject teachers designed these plans themselves and agreed to integrate music into one lesson per week. This level of implementation may be considered intensive compared with the frequency with which musical integration is typically practiced in schools.

Table 2.2. Framework for Integrating Music into the School Curriculum Across Different Subjects

Music integration methods Subjects	background music	content songs from the curriculum	Creativity	Outside the classroom	external talent	performance	music and arts	Opening/closing music
Arabic	1.Classical music-Mozart, Beethoven 2.Nature music-music of water, birds, 3. Jazz relaxing music	"an appreciated girl", "a village in a valley", "our fields".	pupils compose simple melodies to relevant text	1.relevant music in the morning at school, 2.during the breaks,	Talents in parents Talents in teachers	Pupils perform by singing or playing rhythm.	1.drama and music for a specific content 2.drawing and music of a main idea in the text or in the lesson.	"hello my teacher in science lesson", "we had a nice lesson", "my love welcome to the lesson", "thank you thank you".
Hebrew	1.Classical music-Mozart, Beethoven 2.Nature music-music of water, birds, 3. Jazz relaxing music	"two friends", "the fig tree".	pupils compose simple melodies to relevant text	3.pedagogical days 4.website 5.school radio,	Talents in parents Talents in teachers	Pupils perform by singing or playing rhythm.	1.drama and music for a specific content 2.drawing and music of a main idea in the text or in the lesson.	"hello my teacher in science lesson", "we had a nice lesson", "my love welcome to the lesson", "thank you thank you".
English	1.Classical music-Mozart, Beethoven 2.Nature music- music of water, birds, 3. Jazz relaxing music	"the ant and the grasshopper", "old McDonald", "The wheels of the bus".	pupils compose simple melodies to relevant text	6.active break with stations of activities for each discipline, 7.after school activity using related music.	Talents in parents Talents in teachers	Pupils perform by singing or playing rhythm.	1.drama and music for a specific content 2.drawing and music of a main idea in the text or in the lesson.	"hello my teacher in science lesson", "we had a nice lesson", "my love welcome to the lesson", "thank you thank you".

Math	1.Classical music- Mozart, Beethoven 2.Nature music- music of water, birds, 3. Jazz relaxing music	"the song of angels", "the songs of geometric shapes", "the multiplication song". And beat music	1.pupils compose simple melodies to relevant text 2.Pupils build music instruments		Talents in parents Talents in teachers	Pupils perform by singing or playing rhythm.	1.drama and music for a specific content 2.drawing and music of a main idea in the text or in the lesson.	"hello my teacher in science lesson", "we had a nice lesson", "my love welcome to the lesson", "thank you thank you".
Science	1.Classical music- Mozart, Beethoven 2.Nature music- music of water, birds, 3. Jazz relaxing music	"electricity song", "metal songs", "the solar system".	1.pupils compose simple melodies to relevant text 2.Pupils build music instruments		Talents in parents Talents in teachers	Pupils perform by singing or playing rhythm.	1.drama and music for a specific content 2.drawing and music of a main idea in the text or in the lesson.	"hello my teacher in science lesson", "we had a nice lesson", "my love welcome to the lesson", "thank you thank you".
Religion	Religious music- athan	"Al-Adha holiday", "Ramadan", "Mohammad our prophet".	pupils compose simple melodies to relevant text		Talents in parents in athan Talents in teachers in athan	Pupils perform by saying athan or playing rhythm on drum	1.drama and music for a specific content 2.drawing and music of a main idea in the text or in the lesson.	"hello my teacher in science lesson", "we had a nice lesson", "my love welcome to the lesson", "thank you thank you".

The pedagogical model MPIM is written in a common standard of the ministry of education in Israel, and it is addressed exactly to teachers in schools, using their professional language they are familiar with. This makes the pedagogical model very functional to teachers and schools.

The functionality of MPIM lies in the implementation of seven sessions that teachers have applied in the process of teaching-learning-evaluating music through teaching strategies aimed at perception, knowledge, understanding, application, synthesis, valorization, deep experience of music in the context of the curriculum in primary education in Israel.

Furthermore, the suggested pedagogical model emphasizes the importance of conducting a course for teachers that intend to focus on the following:

1. Benefits and value of integrating music in teaching.
2. Ways and methods of integrating music in teaching.
3. Empowerment and encouragement to teachers that they are able to do it.

2.5. Conclusions to Chapter 2

1. The four styles of L. Bresler were identified and analyzed: *Subordinate style*, *Integrative style*, *Affective style*, and *Social integration style* [77]. There are described three levels of integration by S. Snyder [167], while R. Fogarty's model [90] presents 10 levels of integration, from fragmented (where academic subjects remain separate and distinct) to the network level (where a student-oriented process is supported by a network of counselors and resources) [73].

2. Within the implementation of the core curriculum, music is regarded as a functional domain encompassing three principal dimensions: cognitive-psychological, social, and creative [179]. Emotional expression therefore constitutes a central component of foundational music education, alongside musical creation and familiarity with musical literature [179]. Curricular integration has gained increasing prominence in school reform initiatives, particularly at the primary level, where approaches that transcend disciplinary boundaries have long been employed, at least informally, to address diverse educational objectives.

3. The methods of integrating music are examined in relation to the school curriculum through modes of music integration [68; 69]. Both P. M. Hash [103] and C. M. Colwell [82] cite L. Bresler's theory [79] on four types of artistic integration (subordinate, affective, social, and co-equal-cognitive) used by many teachers in the United States [74], offering a series of ideas for teachers to easily implement on their own and to provide additional music-related activities that offer academic benefits without the assistance of a music specialist [144; 74; 133]. The research suggests an integration Model: the MPIM Model.'

4. In the application of the core curriculum, music is considered a functional domain based on three aspects: *the cognitive-psychological aspect*, *the social aspect*, and *the creative aspect*.

Therefore, aspects of emotional expression are a central element in the musical Program developed for these options and include elements of music integration in primary education.

5. Effective implementation of transition programmes aimed at supporting academic success requires strategies that address students' cognitive, emotional, motivational, and volitional needs. These strategies should encompass administrative, socio-individual, pedagogical, curricular, and managerial activities to strengthen support at the individual, interpersonal, and environmental levels. [115].

6. It has been demonstrated that the integration of music into primary education subjects cannot be learned theoretically, but must be lived and directly experienced. As Ernest Bemea said: 'Beyond the teaching of necessary knowledge, education must focus on the formation of consciousness, attitudes, taste, character, and lifestyle.' Education must aim primarily at the human being as a living and complete entity, and the pedagogical act should be focused on the entire human condition. In conclusion, education should not be dedicated solely to the abstract exercise of intelligence, nor exclusively to memory, but must be integrated, cultivating all soul functions, promoting both intellectual and moral virtues.

3. METHODOLOGICAL PERSPECTIVES OF MUSIC INTEGRATION IN THE DIDACTIC OF OTHER DISCIPLINES

3.1 Ascertaining the level of teachers' attitudes and application of music integration in teaching

The central aim of the pedagogic experiment is to identify the level of teachers' attitudes toward music integration in teaching and check the efficiency of the pedagogical model (MPIM) for encouraging teachers to integrate music in teaching and raise the level of their attitudes toward music integration and their application of music integration methods. The insights gained in the wake of the literature review led to determination of the following objectives:

- to identify teachers' efficiency and attitudes towards music integration in Israeli Arab elementary schools.

- to upgrade procedures relating to integrating music in teaching through raising the level of positive attitudes of teachers toward integrating music in teaching, to help teachers in using music integrating methods teaching other disciplines.

Research Methodology:

includes various methodologies: theoretical methods - synthesis, generalization, classification, systematization, comparison, modeling, surveys; empirical methods - observation, testing, questioning, conversation, finding, training, and control experiment; statistical methods: Cronbach alfa, students 't test for independent samples, students' t test for a single sample, bifactorial analysis, unifactorial analysis, etc. At the experimental level: questionnaires, interviews, pedagogical experiment (diagnosis, training, control).

Following formulation of the research questions and objectives, the process of data collection began, comprising two research methods: (1) The statistical methods included: averages, standard deviations and significance, a Pearson correlation, t test for independent groups, multiple regression, frequencies, Cronbach's alpha; (2) Empirical methods systematically that engaged in collecting data that enable synthesis, generalization, reaching conclusions, comparing, categorizing and triangulation. In order to carry out the processes and examinations, I used the following research tools: for the quantitative research I used questionnaires; for the qualitative research I used semi-structured interviews (appendix 3), content analysis, description, presentation of findings.

The research methods that were used in this study are research methods by quantitative paradigm and qualitative paradigm. It seems appropriate to use both methods together in order to obtain a broad enough view through quantitative research and deep enough view through qualitative research.

Descriptive statistical methods:

- Average
- Standard deviations
- Frequencies

Deductive statistical methods:

- Significance
- Cronbach's alpha measure for internal reliability
- Pearson correlation
- t-test for independent groups
- Multiple linear regression
- Fisher test

The research method - Over time two dominant research approaches have developed – quantitative research and qualitative research – each emphasizing a different world perception. The aim in quantitative research is to provide data relating to reality and its interest lies in phenomena so long as they represent a general law. Qualitative research constitutes a scientific way to understand human phenomena taking place from the point of view of the participants.

The third approach is the mixed methods approach, based on the assumption that phenomena exist in education that are explainable, prediction of whose influences has a considerable impact in extensive and varied contexts. On the other hand, the educational system is composed of a variety of complex individuals who are influenced by different cultures, norms and traditions, a fact that prevents identification of a method that will solve all problems holistically. The mixed methods approach claims that the integration of quantitative and qualitative research can constitute an optimal solution and the combination of the two approaches is a valid means and is defined as advantageous, providing a balance between the breadth and depth of the research [24; 27; 118, p.132, 140, 161]. In addition, the advantages of one method are offset by the disadvantages of the other, resulting in a more complete picture being obtained. [22, p.30; 118, p 135.].

The present research has been conducted according to the mixed methods approach.

Study population:**This study will examine one main study population:**

The experimental basis of the research consisted of a sample of **80 teachers** from **four Arab primary schools in Israel**, teaching **Grade 4** in one of the following subjects: **Arabic, Hebrew, English, Mathematics, Science, and Islamic Religious Education**. The sample was heterogeneous with respect to gender, age, marital status, years of teaching experience, academic education, musical background, and teaching specialization. It comprised **30% men** and **70%**

women, with a **mean age of 41 years**. Approximately **90% of the teachers were Muslim** and **10% were Christian**. All participants were full-time teachers. Their average teaching experience was **15 years**, and all participants were married. **Eighty percent** held a **Bachelor's degree**, while **20%** held a **Master's degree**.

Most primary school teachers currently participate in the "**Ofek Hadash**" ("**New Horizon**") program, an educational reform initiated by the Israeli Ministry of Education. Teachers participating in **Ofek Hadash** receive higher salaries than they did before joining the program. As part of this reform, they are required to complete **60 hours of professional development annually**. In addition, teachers receive financial compensation for afternoon working hours.

The research sample was selected randomly from teachers in four primary schools, with **20 teachers from each school**. The sample was divided into six teaching groups: **16 Arabic language teachers, 12 Hebrew language teachers, 12 English language teachers, 16 Science teachers, 16 Mathematics teachers, and 8 Religion teachers**.

For the purposes of data analysis, these six groups were further combined into four subject categories: **Arabic and Hebrew, English, Mathematics and Science, and Religion**.

Research Instruments

The principal research instruments were questionnaires and interviews, as described below.

Questionnaires

A questionnaire was used to collect data on the phenomenon being investigated. The instrument was a standardized series of closed-ended questions to which respondents responded on a pre-determined scale. The responses were coded with the assigned scale. The questionnaire (Appendix 1) started with an introductory statement explaining the purpose of the study. Teachers were told that the results would be used for research and to help improve the processes being studied and their incorporation into the educational system. To promote participation and minimize the probability of a response bias, the respondents were ensured anonymity and confidentiality of their responses.

In the current study three types of questionnaires were used:

Biographical Questionnaire

1. The biographical questionnaire collected the following information for each teacher:

1. Age
2. Gender
3. Educational qualifications (teacher education)
4. Teaching subject (field of teaching)
5. Role within the school
6. Musical education/background

7. Frequency of listening to music, songs, or poetry.

Teachers' Attitudes Questionnaire. In the research a questionnaire of teachers' attitude toward the effectiveness of the pedagogical MPIM model in 9 aspects is used. This questionnaire is for teachers to examine their attitudes towards integrating music in teaching.

The study employed a questionnaire designed to measure teachers' attitudes toward the effectiveness of the Pedagogical Model for the Integration of Musical Activities into the Teaching of Other Subjects in Primary Education across nine dimensions. The questionnaire was intended to assess teachers' attitudes toward integrating musical activities into classroom instruction. More detailed information about each questionnaire item is provided in the dissertation.

The questionnaire contains 9 categories:

1. Emotional effect; questions number: 2,4,21,22,32,35,36,37.
2. Social effect; questions number: 5,28,31,34,40.
3. Cognitive effect; questions number: 1,6,8,9,10,11,13,14,17,26.
4. Motivational effect; questions number: 20,23,25,38.
5. Motoric effect; questions number: 3,12,44.
6. Behavioral effect; questions number: 27,45.
7. Classroom management effect; questions number: 19,29.
8. Achievement effect; questions number: 19,29.
9. General personal attitudes; questions number: 7,16,18,24,33,41,43.

Teachers' Self-Efficacy Questionnaire. In this research a questionnaire of teachers' application and using music integrated methods (8 methods are included and one general sense of ability of music integration - together nine parameters) in teaching is used.

This study also employed a questionnaire (Appendix 2) measuring teachers' self-efficacy (sense of ability) to use and implement integrated musical methods in teaching. The instrument included eight methods of musical integration together with one general dimension measuring overall perceived ability to integrate musical activities into teaching. More detailed information regarding each questionnaire item is provided in the dissertation.

The questionnaire contains 9 categories:

1. Background method; questions number: 1,2,6.
2. Song content method; questions number: 5,8,11,28.
3. Creativity method; questions number: 14,22,30.
4. Outside the classroom method; questions number: 16,17.
5. Performance method; questions number: 25,27,29.
6. External talents; questions number: 18,20.
7. Music and arts method; questions number: 3,4,23.

8. Opening and closing music method; questions number: 9,13.

9. General sense of ability to integrate music in teaching; questions number: 7,10,12,15,19,24,31.

In a reliability test conducted for the entire first part in the present research a value of $\alpha = 0.84$ was obtained, indicating high internal consistency and homogeneity of the items.

Table 3.1 The Alpha Cronbach Reliability of the Attitudes questionnaire (before)

Table 3.1		
Attitudes	Category	Alpha
	1. Emotional	0.85
	2. Social	0.68
	3. Cognitive	0.90
	4. Motivation	0.82
	5. Motoric	0.57 They didn't use
	6. Behavioral	0.65
	7. Achievements	0.92
	8. Classroom Management	0.65 (question 18 not included)
	9. General personal attitudes	0.78 (question 41 not included)

Table 3.2 The Alpha Cronbach Reliability of the Attitudes questionnaire (after)

Table 3.2		
Attitudes	Category	Alpha
	1. Emotional	0.85
	2. Social	0.68
	3. Cognitive	0.91
	4. Motivation	0.82
	5. Motoric	0.90
	6. Behavioral	0.65
	7. Achievements	0.92
	8. Classroom Management	0.65 (question 18 not included)
	9. General personal attitudes	0.83

Table 3.3 The Alpha Cronbach Reliability of the application of music integration methods questionnaire (after)

Table 3.3		
Efficiency	Category	Alpha
	1. Background Music	0.88
	2. Song Content	0.87
	3. Creativity	0.90
	4. Outside the classroom	0.92
	5. External talent	0.84
	6. Performance	0.80
	7. Arts	0.80
	8. Open/close	0.79
	9. sense of ability	0.83

The first measurement capability level was very low, most teachers gave the lowest score. This result is expected given that the participants are not music teachers and do not have any musical training. Because of the limited variance among respondents, it was not possible to calculate the reliability coefficients before.

Interviews. The interview is a research method in which the researcher gathers information with the help of direct interrogation of informers, generally as part of a face-to-face talk. The interview enables an understanding of the interviewees and the significance they attach to this experience. The voices of the subjects are revealed through an open in-depth interview, allowing the personal perspectives of the interviewee to be probed.

Semi-structured interviews were conducted with 22 teachers. These interviews engaged characteristics of music integration and ways of integrating music used in teaching elementary school teachers, and their attitudes toward music integration. In addition, teachers talked about what helped them to overcome the difficulty in integrating music in teaching such that an initial uniformity was established between the respondents. Subsequently, I allowed the interviews to develop, giving the interviewees the feeling that there was room for them, their emotions, and their opinions, and I allowed them to express themselves freely in their own words in order to obtain a story with depth.

The semi-structured interview, which allows the researcher to use a framework of uniform questions, but also allows flexibility and room for questions arising from the interview (Appendix 4 – key questions to teachers). After analyzing the questionnaires, follow-up interviews of 10 teachers were conducted in order to have a clearer picture of some explanations of the analysis of the questionnaires.

On completion of the interviews, I described them verbatim, including non-verbal signs such as coughing, laughter, intonation, noises, etc. The commonly accepted rules of ethics with respect to qualitative interviews were observed. It was important for me to give the interviewees the feeling that I was interested in their stories for their own true value and for their contribution to the research. To ensure perfect anonymity, in presenting the findings of the interviews I used fictitious names for the novice teachers and officers next to their positions.

Content Analysis. Content analysis constitutes one of the most important tools for research and it is used extensively both in quantitative and qualitative research. The aims of content analysis are to examine, analyze, understand meanings, and derive conclusions regarding the studied phenomena. Quantitative content analysis is used extensively in mass media to count overt textual elements, and it can be especially effective when the research contains many cases and data. It should be noted that at times short quantitative descriptions can be focused and convey clearer and more meaningful messages than long narrative descriptions. In contrast, qualitative content analysis is intended to investigate meanings and messages in the database. It is mainly inductive and consolidates the examination of the subjects and the conclusions arising from them.

Quantitative content analysis requires random or probabilistic sampling to ensure the validity of the research, whereas qualitative content analysis is mostly composed of texts that could answer

the research questions in a directed manner. In addition, according to the quantitative approach, results are represented in numbers based on statistical methods whereas in the qualitative approach descriptions are obtained that reflect the researcher's view of the social world being investigated. The answers for the two open questions were processed on both the statistical and qualitative level. In contrast, content analysis of the interviews is solely qualitative and was done following completion of the questionnaire on standpoints, such that a clear notion is obtained regarding the directions that are suitable for the interviews.

Qualitative researchers believe in and advocate the use of triangulation in qualitative research as a means of validating it, proposing the following four types: triangulation of data, triangulation of researchers, triangulation of theories, and triangulation of research methods.

The present research is based on three types of triangulation: (1) Triangulation of data – questionnaire and interview. (2) Theoretical triangulation – manifested by application of a theoretical framework that helped to expand the scope of interpretation; (3) Triangulation of research methods – quantitative and qualitative findings, were subjected to a "rich description", which included all relevant information on the context and containing quotes from the subjects and an in-depth discussion of them.

The scientific novelty of this research lies in identifying the attitudes and self-efficacy of teachers working in Arab primary schools, exposing them to the Pedagogical Model for the Integration of Musical Activities into the Teaching of Other Subjects in Primary Education, and subsequently reassessing their attitudes and self-efficacy following the intervention.

Research Variables. The variables in this research are: teachers' attitudes toward the effectiveness of the pedagogical model (MPIM), teachers' application of music integration methods, and exposure to the pedagogical MPIM model.

Dependent variables in the quantitative research: application of music integration methods, attitudes toward music integration - the effectiveness of MPIM pedagogical model on changing teachers' attitudes and their use of music integration methods.

Independent variables in the quantitative research: music experience; teaching discipline, religiosity.

Basic Research Period. The research had been carried out from 2012 to 2016 and included 4 stages:

1. The first stage – orientation (2011-2012): Literature study related to all the subjects related to integrating music in teaching other disciplines.
2. The second stage (2012) – design: projecting the management methodology model for the improvement of music integration in teaching by elementary school teachers.

3. The third stage (2013-2014) – experimental: verify the differences between teachers who applied the MPIM pedagogical model of integrating music- in their attitudes toward music integration, and in the use of music integration methods. As opposed to those who have not been exposed to the pedagogical MPIM model.

4. The fourth stage (2014-2016) – summarizing: working out the research findings, i.e. analysis, generalization, systematization, summarizing, and description of the experimental research results; studying connections between the theoretical and empirical conclusions, elaborating perspective directions for further scientific researches in this domain.

Procedure

This experiment is organized in 3 stages:

1. Diagnosis (Pre-experimental / Diagnostic Stage)
2. Formation (Formative Experiment)
3. Control

Stage 1: Diagnosis (Pre-experimental Stage)

During the first stage, the level of the variables: teachers' application of music integration and attitudes toward integrating music in teaching and the ways, methods teachers use to integrate music in their teaching is determined. 80 teachers filled 3 questionnaires about their application of music integration, their attitudes toward integrating music in the elementary school and a biographical questionnaire.

The population is divided in 2 groups: the experimental group (EG) and the control group (CG). Both the experimental and control groups included teachers from the four participating schools. Seven professional development sessions were conducted, during which various approaches to integrating musical activities into classroom teaching were presented. Participants were introduced to the integrated music pedagogical model (MPIM).

Within each participating school, school principals agreed to implement music integration into classroom instruction. Consequently, 20 teachers from each school participated in the implementation and application of musical integration within their teaching. The following disciplines participated: Arabic language, Hebrew, English, Math, Science and Religion (Islam), for grade 3 and grade 4.

Schools in the Experimental Group:

- Albayroni elementary school - 227488
- Husein Yasin elementary school - 218842

Schools in the Control Group:

- Iben Sinaa elementary school - 218834
- Alzhraa elementary school - 219584

Table 3.4. The structure of the people included in the experiment

Taught discipline	Experimental group (EG)	Control group (CG)
Arabic	8	8
Hebrew	6	6
English	6	6
Mathematics	12	12
Science	4	4
Religion	4	4
Total	40	40

The total number of the teachers who were exposed to the model of integrating music in teaching is 40 (experimental group). The control group teachers weren't exposed to ways of integrating music in teaching and didn't know the model MPIM.

Stage 2: Formation (Formative Experiment). During the second stage two principals decided to integrate music after they were exposed to ways of integrating music and to the pedagogical model MPIM, including methods, techniques, principles (elaborated previously) in seven meetings after school, only to the experimental group.

Stage 3: Control Stage. In the third stage, called control, the effectiveness of the methodology, methods and techniques of the pedagogical model (MPIM) is checked by rechecking the attitudes of the teachers again and the use of music integration methods. In this stage, both the experimental group and control group participated. The same variables that were checked during diagnosis are checked again after the exposure of the integrating music methods and experiencing music integration. That is how the efficiency was checked.

The same 80 teachers in the research population answered the same two questionnaires about their attitudes towards music integration in teaching and their application of music integration methods again.

After analyzing the questionnaires, interviews of 10 teachers were conducted in order to have a clearer picture of some explanations of the analysis of the questionnaires.

Dependent variables in the quantitative research: application of music integration methods, attitudes toward music integration- the effectiveness of MPIM pedagogical model on changing teachers' attitudes and their use of music integration methods.

Independent variables in the quantitative research: music experience; teaching discipline, religiosity.

3.2 Formative value of the pedagogical model of music integration in the didactic of other disciplines (MPIM)

Formative experiments are aimed at investigating how instructional interventions can be adapted in response to factors that enhance or inhibit their effectiveness in achieving a valued pedagogical goal. Formative experiments are especially applicable to conducting classroom research.

In this research the MPIM pedagogical model was applied in the classroom. This pedagogical model included many integrating ways, and many elements that were thought to be influential for teachers' attitudes and their application of music integration, such as involving teachers' and parents' talents, integration of music in and outside the classroom, accompanied by a website. In addition, this pedagogical model (MPIM) included supportable factors, such as applying music integration tools for the teacher, encouragement and empowerment by an instructor, personal support, and guidance of a professional team. These various elements and factors helped to examine a broad range of interacting factors that influence an intervention's effectiveness as well as its unanticipated consequences.

Formative experiment is described as: "In a formative experiment, the researcher sets a pedagogical goal and finds out what it takes in terms of materials, organization, or changes in intervention to reach the goal.

After the formative experiment in this research, the MPIM pedagogical model was adapted. It was found out that only personal support is not effective, there is a need for teamwork, and team support. Thus, this element was added. Furthermore, I realized during the formative experiment that the in-class integration is not enough, and we should add outside classroom music integration. Moreover, we realized that offering a built-in program arouses a lot of resistance from the teachers. That is why it was decided to build an adjusted program with the professional team.

Education is the growth of character and of intellectual powers, and not the acquisition of knowledge of particular subjects. Thus, the formative contribution of the MPIM pedagogical model implemented in the school can be regarded as significant as well as possibly more significant than its instructional content. There are various disciplines, all contributing to this larger educational purpose: mathematics contributes logical reasoning, accuracy and precision; history contributes judgment, discernment and prudence; and literature contributes sensitivity to the human condition. Likewise, handwriting practice can help beginning learners develop concentration, accuracy, patience, and perseverance while reinforcing attention to spelling and the care required to produce quality work.

The formative value of the MPIM pedagogical model, besides its functionality to integrate music in teaching, is learning the major importance of empowerment and encouragement of teachers to do what they already can do.

In addition, another formative value is the recognition that only holistic and systemic models can lead a change in the methods of teaching.

Furthermore, a great deal of focus can be learnt from the MPIM pedagogical model. The focus is on the personal support and guidance of a professional team by instructors of integrating music in teaching while applying a pedagogical model in general. To lead a change in the teaching methods there should be a personal escort to the teachers working on the MPIM pedagogical model.

Moreover, by applying the MPIM pedagogical model teachers and students had the opportunity to experience and evoke their creativity and use it in teaching methods.

In addition, by applying this MPIM pedagogical model the status of the music educator in the school got higher and got a more dominant role. Furthermore, the field of music education in general got a more valuable position.

Applying the MPIM pedagogical model permitted uploading questions and unconventional thought concerning music and Islam religion. Teachers started thinking outside an ambivalent social frame and started thinking it is possible that some domains can still meet although usually they do not.

These mental habits, work habits, and skills transfer to every area of life. They distinguish the educated person from the uneducated.

Research Findings: This research came to examine several goals and try to find the answers to 5 main hypotheses. The main goals of this study are:

1. To examine the attitudes and the application of music integration methods of elementary school teachers toward integrating music in teaching in the elementary school.
2. In addition the research examined the effect of using the MPIM on attitudes and the application of music integration among the teachers. This study examined the difference that the research formed pedagogical model- “music integration model” (MPIM), will make, as opposed to the traditional music integration ways that teachers generally use.
3. The research examined nine dimensions of teachers’ attitudes toward integrating music and nine dimensions of teachers’ application of music integration.

Table 3.5 Dimensions of attitudes and application of music integration

Attitudes – toward the effectiveness of integrating music in teaching in 9 dimensions	Efficiency – of 9 ways of integration music in teaching
1. Emotional effect	1. using Background Music
2. Social effect	2. using Content Songs

3. Cognitive learning effect	3. using Creativity
4. Motivation effect	4. using Music outside the classroom
5. Motoric effect	5. using External talent
6. Behavioral and discipline effect	6. using Performance
7. Achievements effect	7. using Music and arts
8. Classroom Management effect	8. using Opening/closing music
9. General personal attitudes	9. general Sense of ability

The study also checked whether there is a relationship between teachers' education, teaching field, musical education and experiences - and their attitudes and application of music integration toward integrating music in didactic disciplines, by mentioned techniques.

The criteria of effectiveness (efficiency of the intervention of the pedagogical model):

In the training-development activity of the integrality of music for students, it is necessary that any operation-action, activity, designed and realized, be epistemically motivated - as an element of the artistic-theoretical form, by specific principles of artistic knowledge - musical thinking and methodological methods, techniques/procedures-forms-means specific activities for the formation of musicality and musical thinking as a musical language, which is also the instrument as an imaginative function of music that manifests itself through musical competence, character traits, music components, skills and attitudes in the formation of the student.

This research examined the efficiency and effectiveness of the MPIM pedagogical model on improving the attitudes regarding music integration and the application of music integration of teachers in elementary schools.

The research checked teachers' attitudes toward music integration and their application of music integration methods in their lessons in two points of time. The first was before the intervention and the second was after the intervention of the MPIM pedagogical model.

The criteria in which the efficiency (effectiveness) was measured regard 9 criteria:

1. *Cognitive effect*: teachers inform that after applying the MPIM pedagogical model, the intervention helped the students to understand, internalize, and memorize the material better. And the intervention helped the students to focus and concentrate better in the lesson. The difference in the cognitive effect between before and after the intervention is significant.

2. *Emotional effect*: teachers inform that after applying the MPIM pedagogical model, the intervention helped the students to feel more enjoyment, and more self-confidence and more ability to express themselves. And the intervention helped the students dispel burden, lower anxiety, and pressure. The difference in the emotional effect between before and after the intervention is significant.

3. *Behavioral effect*: teachers inform that after applying the MPIM pedagogical model, the intervention helped the students to have less discipline problems. The difference in the behavioral effect between before and after the intervention is significant.

4. *Social effect*: teachers inform that after applying the MPIM pedagogical model, the intervention helped to improve the relationships among the students, and between the students and their teacher. And the intervention improved the social atmosphere, and the cohesion in the class. The difference in the social effect between before and after the intervention is significant.

5. *Motivational effect*: teachers inform that after applying the MPIM pedagogical model, the intervention improves the enthusiasm among the students, and students become more active. The difference in the motivational effect between before and after the intervention is significant.

6. *Achievements*: teachers inform that after applying the MPIM pedagogical model, the intervention improved the achievements of the students, and increased the number of students who passed the exam. The difference in the achievement effect between before and after the intervention is significant.

7. *Motoric effect*: teachers inform that after applying the MPIM pedagogical model, the intervention helped the students to develop the crude motoric skills and the fine motoric skills and coordination of the student.

8. *Classroom management effect*: teachers inform that after applying the of MPIM pedagogical model, the intervention helped them in classroom management

9. *General personal attitudes*: change in teachers' attitudes towards music integration: teachers state that the application of the MPIM pedagogical model has formed more positive attitudes towards the effect of music integration on teaching. The difference in attitude before and after the intervention is significant.

The methods and instruments by which the effects of the use of music on the students' learning activity were identified is by a self-report questionnaire that the teacher filled before and after the experiment. The questionnaire refers to attitudes toward the effectiveness of music integration and the sense of ability they feel towards applying methods of music integration

**Table 3.5: Differences in attitudes before and after the exposure to the MPIM
In the experimental group**

Attitudes (Experimental group)						
Category	Before		After		T	significance
	Average	SD	Average	SD		
1. Emotional	2.01	0.84	3.85	0.66	14.89***	0,000
2. Social	2.08	0.70	3.65	0.74	15.55***	0,000
3. Cognitive	1.89	0.69	3.62	0.60	16.88***	0,000
4. Motivation	2.09	0.83	3.90	0.72	12.88***	0,000
5. Motoric	1.75	0.46	3.30	0.84	12.39***	0,000
6. Behavioral	1.94	0.61	3.16	0.57	11.49***	0,000

7. Achievements	2.01	0.84	3.86	0.66	14.89***	0,000
8. Classroom Management	2.09	0.55	3.86	0.74	13.52***	0,000
9. General personal attitudes	2.41	0.87	3.56	0.93	8.36***	0,000

*** $p < 0.001$

Table 3.5 summaries the averages of attitudes for teachers in the experimental group in the 9 parameters checked in the study. Table 3.4 compares these averages before and after the exposure to the MPIM pedagogical model.

**Table 3.6: Differences in attitudes before and after the exposure to the MPIM
In the control group**

Attitudes (Control group)						
Category	Before		After		T	significance
	Average	SD	Average	SD		
1. Emotional	1.74	0.50	1.80	0.39	0.82	0.415
2. Social	1.85	0.44	1.91	0.44	0.97	0.337
3. Cognitive	1.73	0.42	2.05	0.32	6.40***	0.000
4. Motivation	1.72	0.47	1.89	0.45	2.21	0.032
5. Motoric	1.64	0.48	1.77	0.50	1.43	0.160
6. Behavioral	1.70	0.40	2.35	0.32	9.70***	0.000
7. Achievements	1.75	0.51	1.81	0.40	0.82	0.415
8. Classroom Management	1.88	0.53	1.99	0.53	1.25	0.218
9. General personal attitudes	2.06	0.79	2.12	0.56	0.89	0.378

*** $p < 0.001$

Table 3.6 summaries the averages of attitudes for teachers in the control group in the 9 parameters checked in the study. Table 3.5 compares these averages before and after the exposure to the MPIM pedagogical model.

Table 3.5 shows that in the experimental group there were significant changes in teachers' attitudes. The changes were reflected in each aspect. However, in the control group, there were no significant changes in the aspects: emotional, social, motor management, class management, achievements, and general personal attitudes. In the control group, attitudes improved in aspects: cognitive, motivational, and behavioral.

The charts below show the changes in every aspect in the experimental group and the control group.

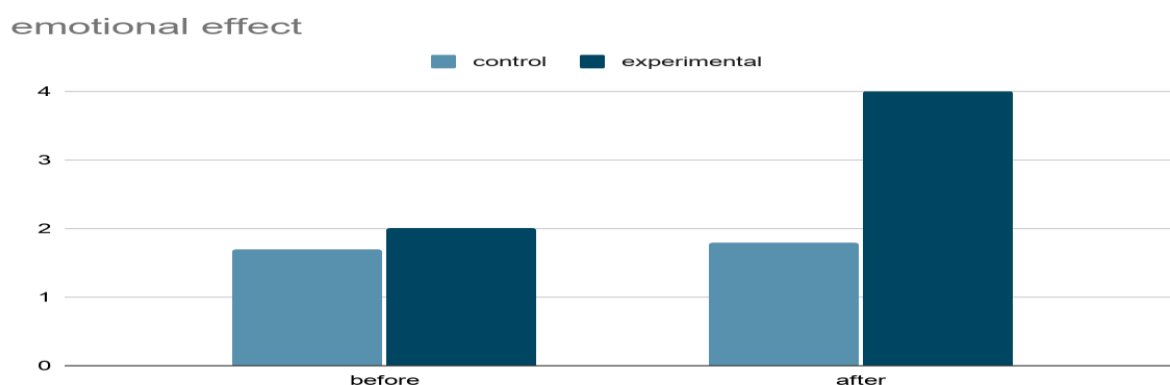


Chart 3.1: Teacher attitudes - effectiveness of music integration on the emotional level

Chart 3.1 shows that the emotional aspect improved after the intervention.

The findings show that according to teachers' attitudes, the emotional aspect had changed in the experimental group significantly more than in the control group.

Before the intervention, teachers' attitudes in both groups were similar. In the experimental group, teachers viewed music integration as PARTLY or MINIMALLY effective in the emotional aspect. The difference between the experimental and control group was not significant (12%).

After the intervention, there was no change in the control group, but a significant 92% change in the experimental group, as for the contribution of musical integration to the emotional aspect of learning, which means that the intervention changed the teacher's attitudes in this regard. According to the teachers in the experimental group music integration intervention is effective on the emotional aspect (according to teachers, students had lower anxiety, stress and tension, strengthen self-confidence and higher sense of ability, and enjoyment during the lesson). The intervention changed teachers' attitudes about the contribution of music integration to the emotional aspect of learning.

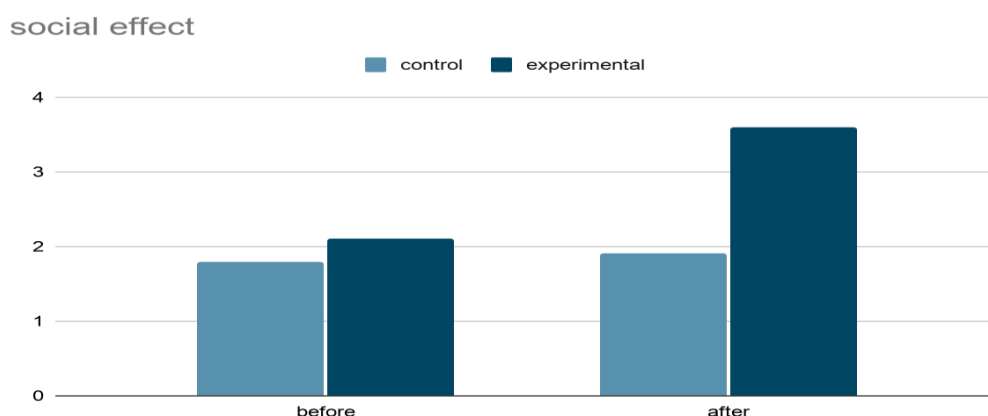


Chart 3.2: Teacher attitudes - effectiveness of music integration on the social level

Chart 3.2 shows that the social aspect improved after the intervention.

The findings show that teachers' attitudes from a social point of view have changed significantly in the experimental group much more than in the control group.

Prior to the intervention, the attitudes of teachers in both groups were similar, regarding the social aspect of learning.

Before the intervention, teacher attitudes in both groups were similar, regarding the social aspect of learning. In the experimental group, teachers viewed music integration as PARTLY or MINIMALLY effective in the social aspect. The difference between the experimental and control group was not significant (11%).

After the intervention, there was no change in the control group, but a significant change of 75% in the experimental group, regarding the contribution of musical integration to the social aspect of learning. This shows that teachers' attitudes concerning the effectiveness of music integration changed in the experimental group. According to the teachers in the experimental group music integration intervention is effective on the social aspect (according to teachers, in the lessons there was more positive social atmosphere and more cohesion. Students had more positive relationships between them and between the pupil and his teacher). The intervention changed teachers' attitudes about the contribution of music integration to the social aspect of learning.

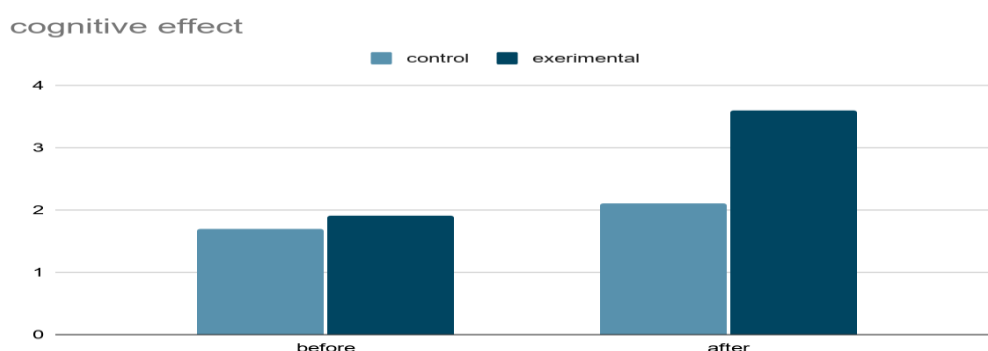


Chart 3.3: Teacher attitudes - effectiveness of music integration on the cognitive level

Chart 3.3 shows that the cognitive aspect improved after the intervention.

The findings show that according to teachers' attitudes the cognitive aspect had changed in the experimental group significantly more than in the control group.

Before the intervention, in terms of cognition the attitudes of teachers in both groups were similar. In the experimental group, teachers viewed music integration as PARTLY or MINIMALLY effective in the cognitive aspect. The difference between the experimental and control group was not significant (8%).

After the intervention, there was no change in the control group, but a significant change of 92% in the experimental group. This shows that teachers' attitudes concerning the effectiveness of music integration changed in the experimental group. According to the teachers in the experimental group music integration intervention is effective on the cognitive aspect (according to teachers, students had more understanding and internalizing of the material, it was easier for

them to memorize the material). The intervention changed teachers' attitudes about the contribution of music integration to the cognitive aspect of learning.

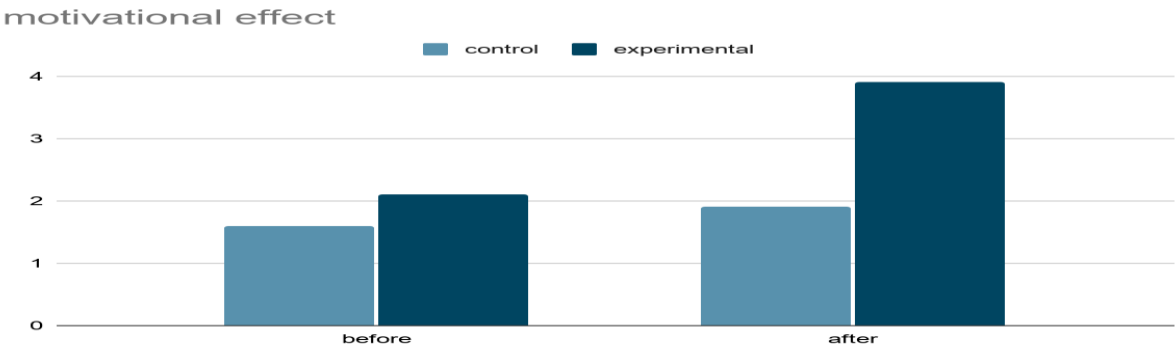


Chart 3.4: Teacher attitudes - effectiveness of music integration on the motivation level

Chart 3.4 shows that the motivational aspect improved after the intervention. The findings show that according to teachers' attitudes the motivation aspect had changed in the experimental group significantly more than in the control group.

Before the intervention, teachers' attitudes in both groups were similar regarding emotional aspects. In the experimental group, teachers viewed music integration as PARTLY or MINIMALLY effective in the motivation aspect. Difference between the experimental and control group was not significant (18%). After the intervention, there was no change in the control group, but a significant change of 87% in the experimental group, as for motivational level.

This shows that teachers' attitudes concerning the effectiveness of music integration changed in the experimental group. According to the teachers in the experimental group, music integration intervention is effective on the motivational aspect (according to teachers, students had more enthusiasm, and were more active). The intervention changed teachers' attitudes about the contribution of music integration to the motivation aspect of learning.

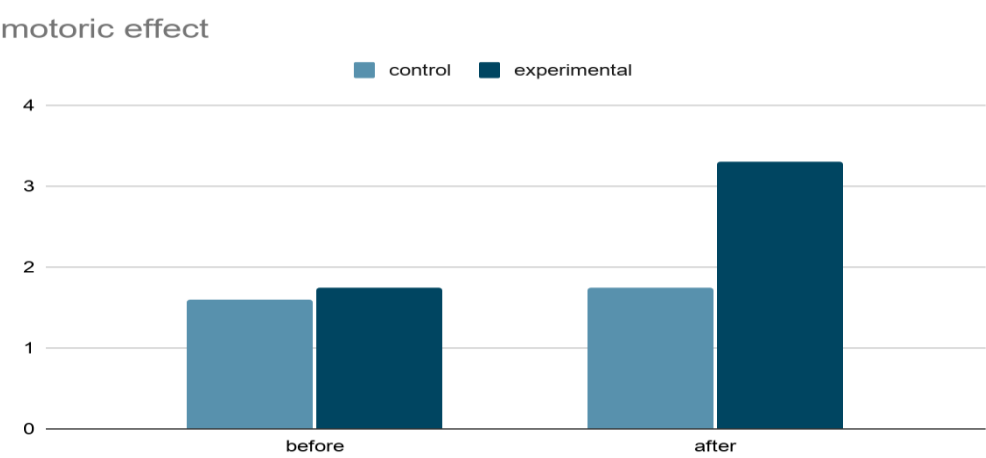


Chart 3.5: Teacher attitudes - effectiveness of music integration on the motoric level

Chart 3.5 shows that the motoric aspect improved after the intervention.

The findings show that according to teachers' attitudes the motoric aspect had changed in the experimental group significantly more than in the control group.

Before the intervention, teachers' attitudes in both groups were similar. In the experimental group, teachers viewed music integration as PARTLY or MINIMALLY effective in the motoric aspect. The difference between the experimental and control group was not significant (6%).

After the intervention, there was no change in the control group, but a significant change of 89% in the experimental group, in the motoric aspect. This shows that teachers' attitudes concerning the effectiveness of music integration changed in the experimental group. According to the teachers in the experimental group, music integration intervention is effective on the motoric aspect (like improving fine motoric skills and crude motoric skills). The intervention changed teachers' attitudes about the contribution of music integration to the motoric aspect of learning.

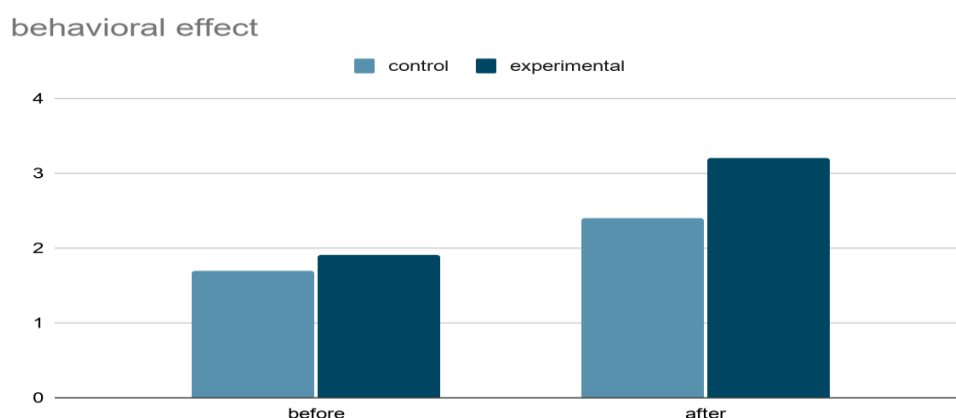


Chart 3.6: Teacher attitudes - effectiveness of music integration on the behavioral level

Chart 3.6 shows that the behavioral aspect improved after the intervention at both groups.

The findings show that according to teachers' attitudes the behavioral aspect had changed in the experimental group significantly more than in the control group.

Before the intervention, teacher attitudes in both groups were similar. In the experimental group, teachers viewed music integration as PARTLY or MINIMALLY effective in the behavioral aspect. The difference between the experimental and control group was not significant (12%).

After the intervention, there was no change in the control group, but a significant change of 63% in the experimental group. This shows that teachers' attitudes concerning the effectiveness of music integration changed in the experimental group. According to the teachers in the experimental group, music integration intervention is effective on the behavioral aspect (like raising focus and concentration at the lesson and decreasing discipline problems). The intervention changed teachers' attitudes about the contribution of music integration to the behavioral aspect of learning.

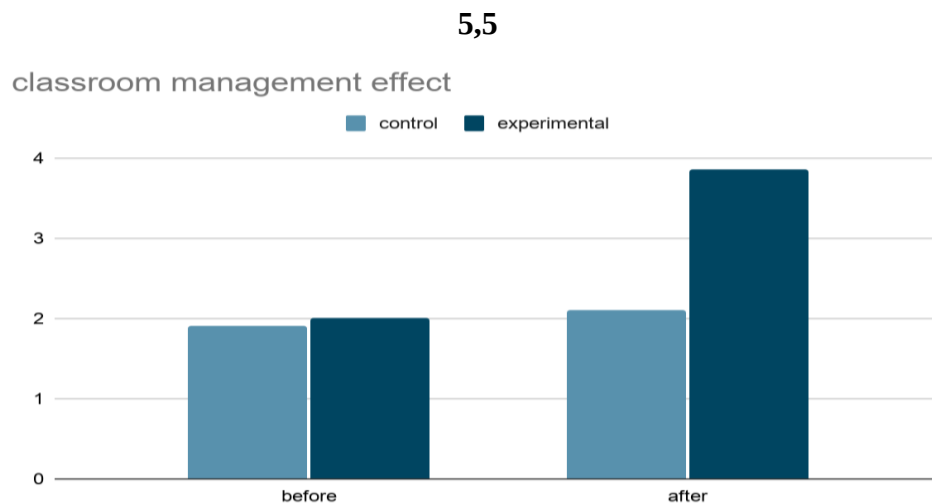


Chart 3.7: Teacher attitudes - effectiveness of music integration on the classroom management level

Chart 3.7 shows that the classroom management aspect improved after the intervention.

The findings show that according to teachers' attitudes the classroom management aspect had changed in the experimental group significantly more than in the control group.

Before the intervention, teachers' attitudes in both groups were similar at the level of class management. In the experimental groups, teachers viewed music integration as PARTLY or MINIMALLY effective in the classroom management aspect. The difference between the experimental and control group was not significant (10%).

After the intervention, there was no change in the control group, but a significant change of 85% in the experimental group. This shows that teachers' attitudes concerning the effectiveness of music integration changed in the experimental group at the level of class management. According to the teachers in the experimental group, music integration intervention is effective on the classroom management aspect. The intervention changed teachers' attitudes about the contribution of music integration to the classroom management aspect of learning.

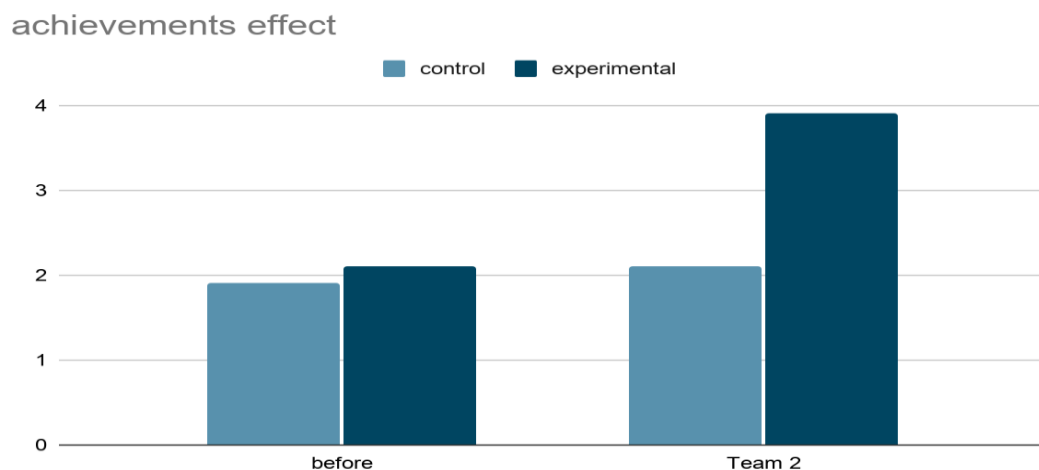


Chart 3.8: Teacher attitudes - effectiveness of music integration in achievements

Chart 3.8 shows that the achievement aspect improved after the intervention.

The findings show that according to teachers' attitudes the achievements of the students had changed in the experimental group significantly more than in the control group.

Before the intervention, teachers' attitudes in both groups were similar as for pupils' achievements. In the experimental groups, teachers viewed music integration as PARTLY or MINIMALLY effective in this aspect. The difference between the experimental and control group was not significant (13%).

After the intervention, there was no change in the control group, but a significant change of 92% in the experimental group. This shows that teachers' attitudes concerning the effectiveness of music integration changed in the experimental group. According to the teachers in the experimental group, music integration intervention is effective on students' achievements. The intervention changed teachers' attitudes about the contribution of music integration to the achievement's aspect of learning.

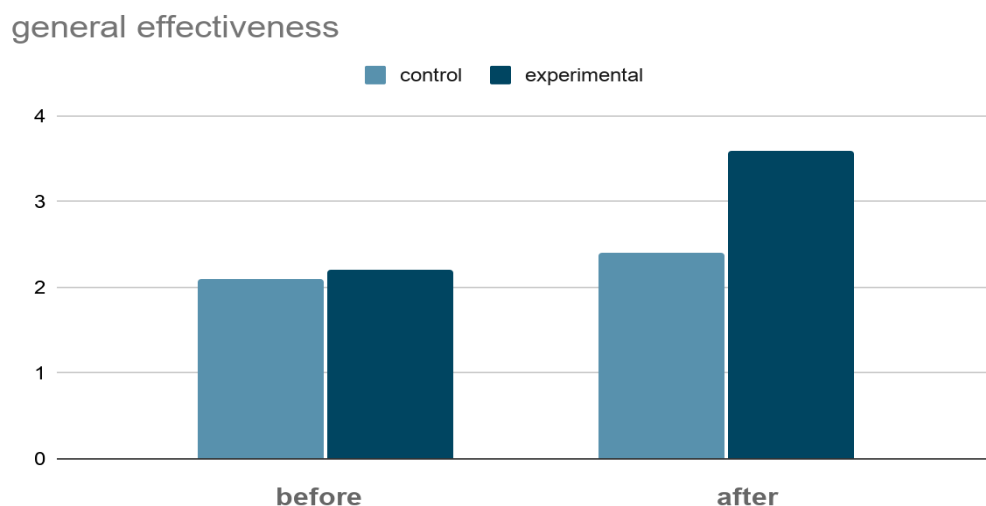


Chart 3.9: Teacher attitudes - effectiveness of music integration in general

Chart 3.9 shows that the general attitudes of teachers toward the effectiveness of integrating music had changed in the experimental group significantly more than in the control group. Before the intervention, general teacher attitudes in both groups were similar. In the experimental groups, teachers viewed music integration as PARTLY or MINIMALLY effective. The difference between the experimental and control group was not significant (27%). After the intervention, there was no change in the control group, but a significant change of 48% in the experimental group. This shows that the intervention changed teacher attitudes about the contribution of music integration in general.

Table 3.7: Differences in efficacy (sense and ability) before and after exposure to MPIM in the experimental group

application (Experimental group)						
Category	Before		After		T	significance
	Average	SD	Average	SD		
1. Background music	1.10	0.23	3.34	1.17	12.31***	,000
2. Content	1.48	0.55	3.17	1.01	11.40***	,000
3. Creativity	1.37	0.59	2.81	1.51	7.09***	,000
4. Outside the classroom	1.08	0.14	2.91	1.08	10.96***	,000
5. External	1.05	0.15	2.66	0.98	10.49***	,000
6. Performance	1.19	0.22	2.29	0.83	9.43***	,000
7. Arts	1.16	0.29	2.90	0.97	10.85***	,000
8. Open/Close	1.31	0.48	3.05	1.03	10.28***	,000
9. general sense of ability	1.10	0.23	3.34	1.17	12.31***	,000

*** $p < 0.001$

Table 3.7 summaries the averages of teachers' application of music integration in the experimental group in the 9 parameters checked in the study. Table 3.7 compares these averages before and after the exposure to the MPIM pedagogical model.

Table 3.8: Differences in music integration application before and after the exposure to the MPIM

Efficiency (Control group)						
Category	Before		After		T	significance
	Average	SD	Average	SD		
1. Background music	1.09	0.19	1.30	0.34	3.59*	0.001
2. Content	1,31	0,46	1,42	0,47	1.83	0.074
3. Creativity	1,13	0,29	1,28	0,45	2.22	0.032
4. Outside the classroom	1,07	0,14	1,16	0,26	2.15	0.038
5. External	1,06	0,18	1,19	0,21	3.56	0.001
6. Performance	1,10	0,14	1,20	0,25	2.64	0.012
7. Arts	1,06	0,20	1,26	0,32	3.56	0.001
8. Open/Close	1,18	0,33	1,33	0,38	2.30	0.027
9. general sense of ability	1,09	0,19	1,30	0,34	3.59***	0.001

*** $p < 0.001$

Table 3.8 summaries the averages of teachers' application of music integration in the control group in the 9 parameters checked in the study. Table 3.8 compares these averages before and after the exposure to the MPIM pedagogical model.

Tables 3.7 and 3.8 show that in the experimental group, there were significant changes in teachers' application of music integration methods. The changes were reflected in each of the methods and in the general sense of ability to integrate music. However, in the control group, there were no highly significant changes in all aspects. In the control group, the effectiveness improved

significantly only in the aspects: background music, use of external talents, arts and general sense of ability.

The charts below show the changes in every aspect in the experimental group and the control group.

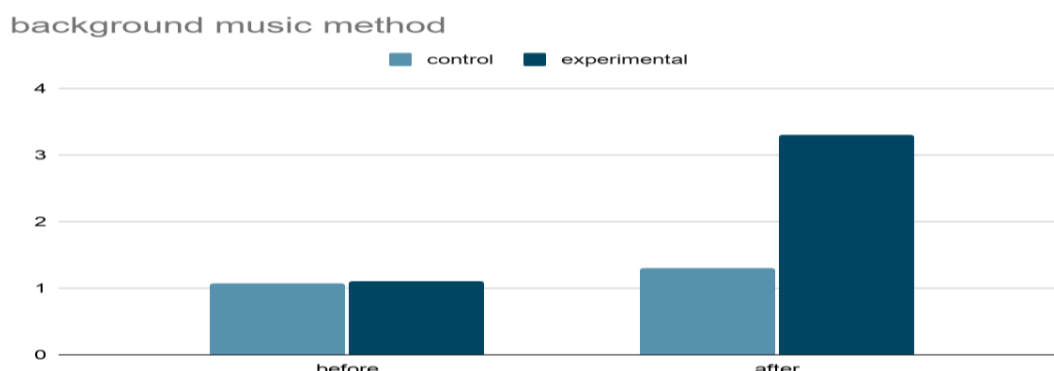


Chart 3.10: Teacher application of music – regarding using the method of background music

Chart 3.10 shows that the sense of ability to integrate music has changed after the intervention.

The findings show that teachers' application of background music had changed in the experimental group significantly more than in the control group.

Before the intervention, teachers' sense of ability to use background music in teaching in both groups were similar. In the experimental groups, teachers viewed themselves as having a low sense of ability to use background music before the intervention. The difference between the experimental and control group was not significant (1%).

After the intervention, there was no significant difference in the control group, but a very significant change of 204% in the experimental group. According to the teachers who were exposed to the MPIM pedagogical model and experienced it that they feel more capable to use background music to integrate music in teaching. This shows that teachers' sense of ability regarding using background music in order to integrate music in teaching has changed after the intervention in the experimental group. The intervention changed teachers' sense of ability regarding using background music.

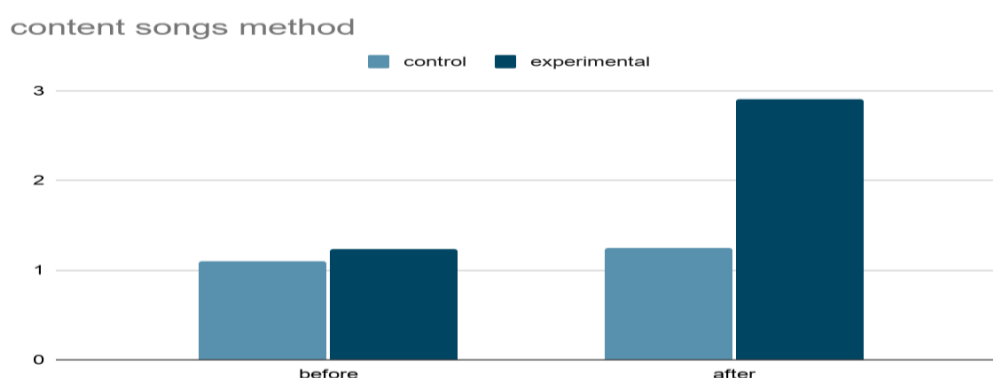


Chart 3.11: Teacher application of music integration – regarding using the method of content songs

Chart 3.11 shows that the sense of ability to integrate music has changed after the intervention.

The findings show that music integration application of teachers regarding using content songs had changed in the experimental group significantly more than in the control group.

Before the intervention, teachers' sense of ability to use content songs in teaching in both groups were similar as for the use of content songs. In the experimental groups, teachers viewed themselves as having a low sense of ability to use content songs before the intervention. The difference between the experimental and control group was not significant (11%).

After the intervention, there was no significant change in the control group, but a highly significant change of 114% in the experimental group. According to the teachers who were exposed to the MPIM pedagogical model and experienced it, they feel more capable of using content songs to integrate music in teaching. This shows that teachers' sense of ability regarding using content songs in order to integrate music in teaching has changed after the intervention in the experimental group. The intervention changed teachers' sense of ability regarding using content songs.

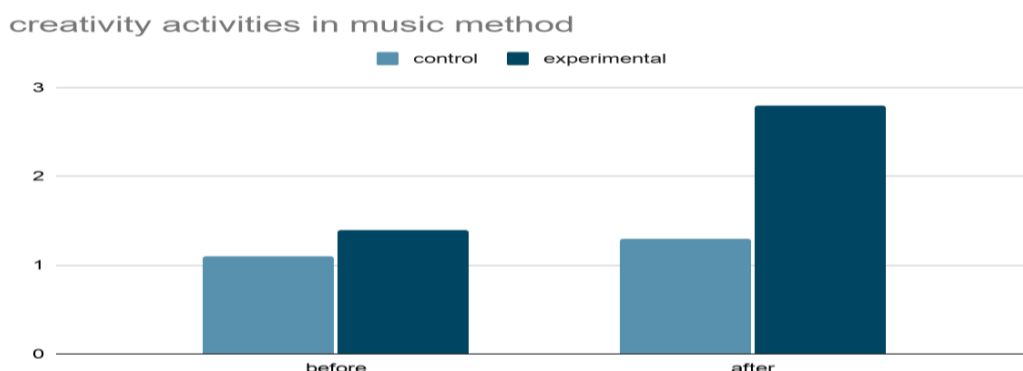


Chart 3.12: Teacher application of music integration – regarding using the method of creativity activities in music

Chart 3.12 shows that the sense of ability to integrate music has changed after the intervention.

The findings show that the application of music integration of teachers regarding using creativity activities in music had changed in the experimental group significantly more than in the control group.

Before the intervention, teachers' sense of ability to use music creativity activities in teaching in both groups were similar. In the experimental groups, teachers viewed themselves as having a low sense of ability to use creativity activities in music before the intervention. The difference between the experimental and control group was not significant (18%).

After the intervention, there was no significant change in the control group, but a significant change of 105% in the experimental group. According to the teachers who were exposed to the MPIM model and experienced it that they feel more capable to use music creativity activities to integrate music in teaching. Teachers ask students to create a song, or to compose a melody. This shows that teachers' sense of ability regarding using music creativity activities to integrate music in teaching has changed after the intervention in the experimental group. The intervention changed teachers' sense of ability regarding using music creativity activities.

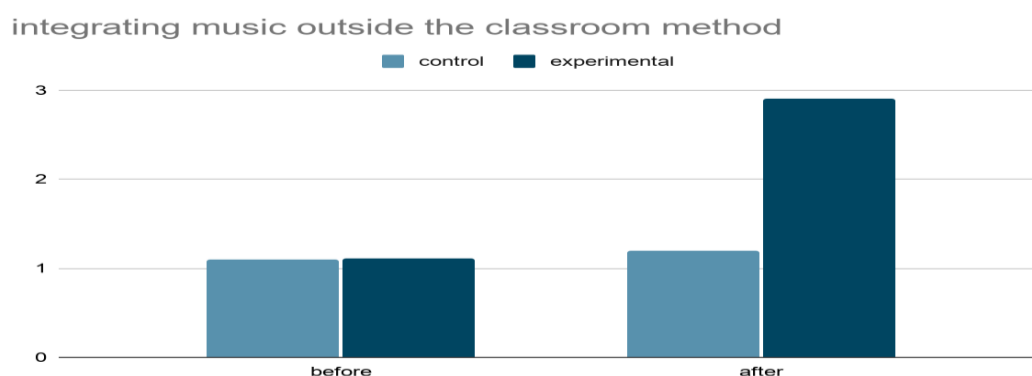


Chart 3.13: Teacher application of music integration – regarding using the method of integrating music outside the classroom

Chart 3.13 shows that the sense of ability to integrate music has changed after the intervention.

The findings show that the application of music integration of teachers regarding using the method of integrating music outside the classroom had changed in the experimental group significantly more than in the control group.

Before the intervention, teachers' sense of ability to use the method of integrating music outside the classroom in both groups were similar. In the experimental groups, teachers viewed themselves as having a low sense of ability to use the method of integrating music outside the classroom before the intervention. The difference between the experimental and control group was not significant (1%).

After the intervention, there was no significant change in the control group, but a highly significant change of 169% in the experimental group. According to the teachers, who were exposed to the MPIM pedagogical model and experienced it, they felt more capable to use the method of integrating music outside the classroom, such as, playing a content song in the active-break, or publishing a song in the the school website. This shows that teachers' sense of ability regarding using the method of integrating music outside the classroom has changed after the intervention in the experimental group. The intervention changed teachers' sense of ability regarding using the method of integrating music outside the classroom.

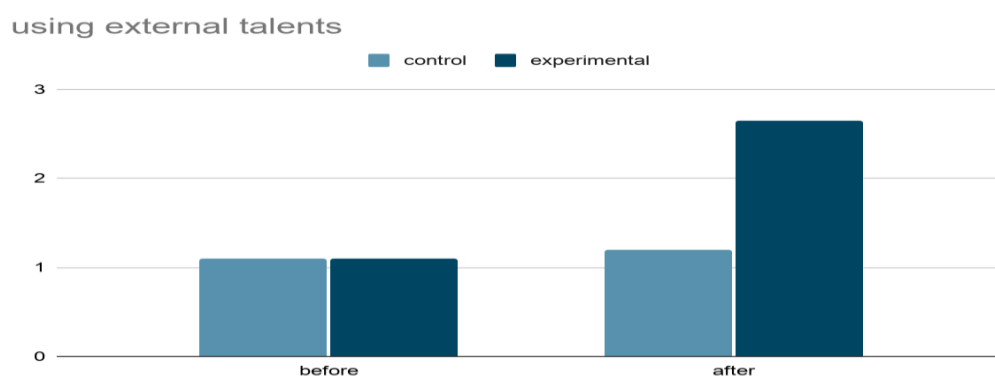


Chart 3.14: Teacher application of music integration – regarding the method of using external talents

Chart 3.14 shows that the sense of ability to integrate music has changed after the intervention.

The findings show that the application of music integration of teachers regarding the method of using external talents in teaching had changed in the experimental group significantly more than in the control group.

Before the intervention, teachers' sense of ability to use external talents in teaching in both groups were similar. In the experimental groups, teachers viewed themselves as having a low sense of ability to use external talents in teaching before the intervention. The difference between the experimental and control group was not significant (1%).

After the intervention, there was no significant change in the control group, but a very significant change of 153% in the experimental group. According to the teachers who were exposed to the MPIM pedagogical model and experienced it that they feel more capable to use external talents to integrate music in teaching, such as inviting parents or teachers who got music talent to play or sing in front of the class. This shows that teachers' sense of ability regarding using external talents to integrate music in teaching has changed after the intervention in the experimental group. The intervention changed teachers' sense of ability regarding the method of using external talents.

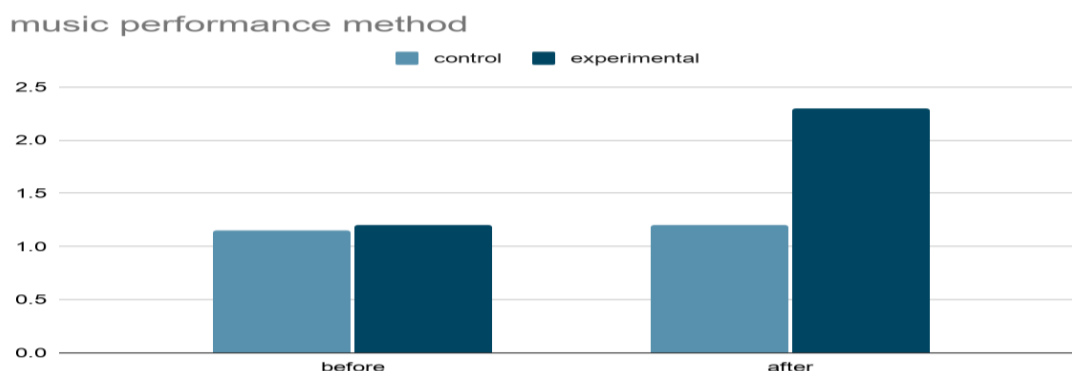


Chart 3.15: Teacher application of music integration – regarding using the method of performance of music

Chart 3.15 shows that the sense of ability to integrate music has changed after the intervention.

The findings show that the application of music integration of teachers regarding using the method of performance of music had changed in the experimental group significantly more than in the control group.

Before the intervention, teachers' sense of ability to use performance of music in teaching in both groups were similar. In the experimental groups, teachers viewed themselves as having a low sense of ability to use the performance of music before the intervention. The difference between the experimental and control group was not significant (8%).

After the intervention, there was no significant change in the control group, but a very significant change of 92% in the experimental group. According to the teachers who were exposed to the MPIM pedagogical model and experienced it that they feel more capable to use performance of music to integrate music in teaching such as asking the students to play a song or to sing a song in front of the class. This shows that teachers' sense of ability regarding using performance of music in order to integrate music in teaching has changed after the intervention in the experimental group. The intervention changed teachers' sense of ability regarding using music.

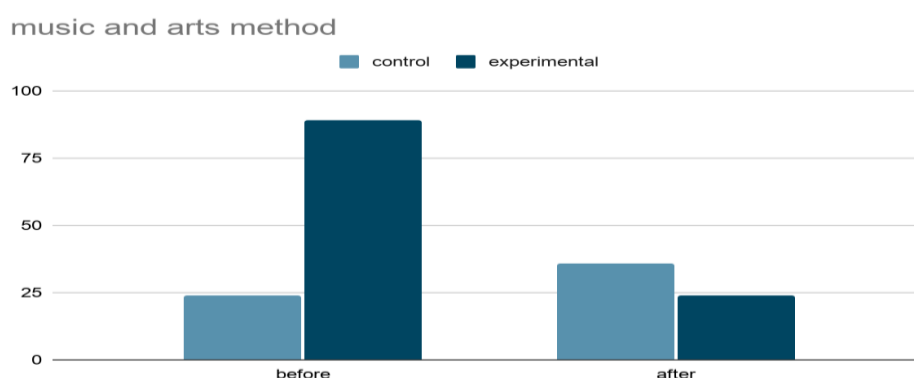


Chart 3.16: Teacher application of music integration – regarding using the method of music with arts

Chart 3.16 shows that the sense of ability to integrate music has changed after the intervention.

The findings show that the application of music integration of teachers regarding using the method of music with arts had changed in the experimental group significantly more than in the control group.

Before the intervention, teachers' sense of ability to use the method of music with arts in teaching in both groups were similar. In the experimental groups, teachers viewed themselves as having a low sense of ability to use the method of music with arts before the intervention. The difference between the experimental and control group was not significant (9%).

After the intervention, there was no significant change in the control group, but a highly significant change of 150% in the experimental group. According to the teachers who were exposed to the MPIM pedagogical model and experienced it, they feel more capable of using the method of music with arts to integrate music in teaching. Teachers ask students to sing a content song with hand moves, or to draw a picture related to the subject while listening to a content song. This shows that teachers' sense of ability regarding using the method of music with arts in order to integrate music in teaching has changed after the intervention in the experimental group. The intervention changed teachers' sense of ability regarding using the method of music with arts.

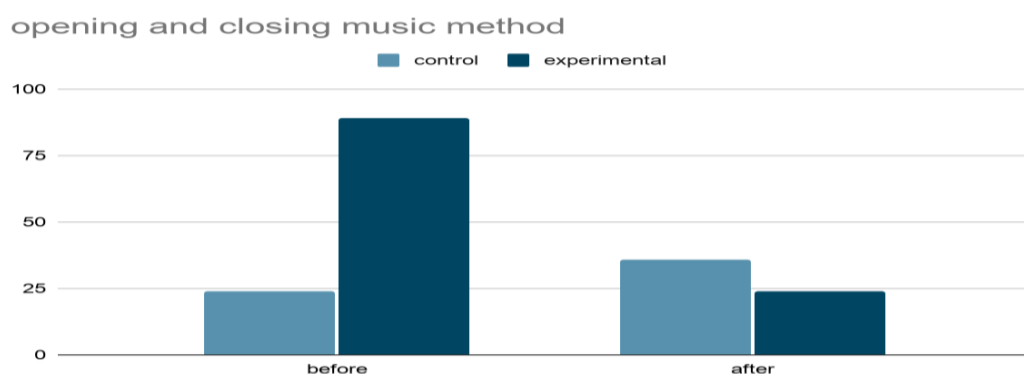


Chart 3.17: Teacher effectiveness - using the method of integrating music at the beginning and end of the lesson

Chart 3.17 shows that the sense of ability to integrate music has changed after the intervention. The findings show that the application of music integration of teachers regarding the method of opening or closing music in the lesson had changed in the experimental group significantly more than in the control group.

Before the intervention, teachers' sense of ability to use the method of opening or closing music in the lesson in both groups were similar. In the experimental groups, teachers viewed themselves as having a low sense of ability to use the method of opening or closing music in the lesson before the intervention. The difference between the experimental and control group was not significant (10%).

After the intervention, there were no significant changes in the control group, but a very significant change of 133% in the experimental group. According to the teachers who were exposed to the MPIM pedagogical model and experienced it that they feel more capable to use the method of opening or closing music to integrate music in the lesson, such as playing a song in the beginning of the lesson or singing a song at the end of the lesson. This shows that teachers' sense of ability regarding using the method of opening or closing music in the lesson in order to integrate music in teaching has changed after the intervention in the experimental group. The intervention changed teachers' sense of ability regarding the method of using the method of opening or closing music in the lesson.

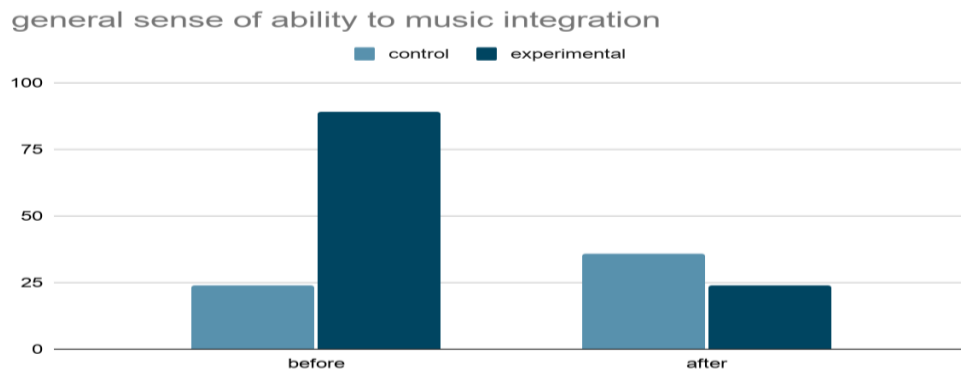


Chart 3.18: Teacher application of music integration – general sense of ability to music integration

Chart 3.17 shows that the general sense of ability to integrate music has changed after the intervention.

The findings show that the application of music integration of teachers regarding music integration in the lesson had changed in the experimental group significantly more than in the control group, in terms of the general sense of the ability to integrate music.

Before the intervention, teachers' general sense of ability to integrate music in the lesson in both groups were similar. In the experimental groups, teachers viewed themselves as having a low general sense of ability to integrate music in the lesson before the intervention. The difference between the experimental and control group was not significant (1%).

After the intervention, there was no significant change in the control group, but a very high significant change of 204% in the experimental group. According to the teachers who were exposed to the MPIM pedagogical model and experienced it that they feel more capable to integrate music in the lesson. This shows that teachers' general sense of ability regarding music integration in teaching has changed after the intervention in the experimental group.

Further, the averages in the experimental group were compared before exposure to the MPIM pedagogical model, depending on the musical experience of the subjects, using the ANOVA technique.

Table 3.9: Differences in attitudes of teachers with musical experience and teachers with no musical experience in the experimental group before exposure to the MPIM pedagogical model

Group Statistics						
Attitudes of teachers with musical experience and teachers with no musical experience (Before)						
	experience	N	Average	Std. Deviation	T	Sig. (2-tailed)
B-emotional	With	6	3.02	1.13	3.690	.001
	with no	34	1.83	0.64	2.502	.049
B-social	With	6	2.93	0.71	3.677	.001
	with no	34	1.92	0.60	3.256	.016

B-cognitive	With	6	2.63	1.07	3.178	.003
	with no	34	1.75	0.52	1.957	.103
B-motivation	With	6	3.13	1.12	3.850	.000
	with no	34	1.91	0.63	2.595	.044
B-motoric	With	6	2.33	0.58	3.909	.000
	with no	34	1.64	0.35	2.784	.034
B-behavioral	With	6	2.83	0.62	4.863	.000
	with no	34	1.78	0.46	3.913	.008
B-classroom management	With	6	2.70	0.57	3.280	.002
	with no	34	1.98	0.48	2.885	.026
B-achievements	With	6	3.02	1.12	3.680	.001
	with no	34	1.84	0.63	2.402	.048
B-general	With	6	3.69	0.57	4.909	.000
	with no	34	2.18	0.70	5.688	.000

Table 3.9 shows that teachers with musical experience had more positive attitudes toward integrating music in teaching, more than teachers without musical experience. The differences were reflected in each of the aspects. These teachers are from the experimental group before the exposure to the MPIM pedagogical model.

Chart 3.19 below displays the differences between teachers with musical experience and teachers without musical experience- in every aspect of attitudes within the experimental group before exposing PMIM.

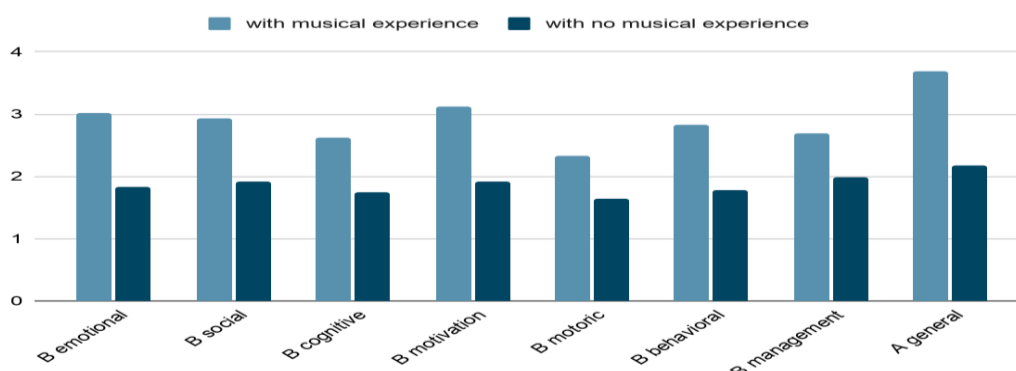


Chart 3.19: Teachers attitudes from the experimental group, with or without musical experience, before exposure to the PMIM pedagogical model

The comparison of the averages was done within the experimental group after the exposure to the MPIM pedagogical model.

Table 3.10: Differences in attitude of teachers with musical experience and teachers without musical experience in the experimental group, after exposure to the MPIM pedagogical model

Group Statistics						
Attitudes of teachers with musical experience and teachers with no musical experience (After)						
Attitudes	experience	N	Mean	Std. Deviation	T	Sig.(2-tailed)
A-emotional	with	6	4.47	0.38	2.63	.012
	with no	34	3.75	0.64	3.74	.003

A-social	with	6	4.40	0.33	2.94	.005
	with no	34	3.51	0.71	4.81	.000
A-cognitive	with	6	4.16	0.23	2.55	.015
	with no	34	3.52	0.60	4.55	.000
A-motivation	with	6	4.46	0.35	2.16	.037
	with no	34	3.80	0.72	3.48	.004
A-motoric	with	6	3.50	0.70	0.62	.537
	with no	34	3.26	0.87	0.72	.490
A-behavioral	with	6	3.54	0.36	1.78	.082
	with no	34	3.10	0.57	2.43	.035
A-classroom management	with	6	4.29	0.33	1.56	.126
	with no	34	3.78	0.77	2.66	.016
A-achievements	with	6	3.12	1.12	3.780	.001
	with no	34	1.94	0.63	2.432	.038
A-general	with	6	4.40	0.27	2.55	.015
	with no	34	3.42	0.92	5.03	.000

Table 3.10 shows that in the experimental group, attitudes of teachers with musical experience significantly increase and so in the group of teachers with no musical experience. Still, teachers with musical experience had significantly more positive attitudes towards the integration of music than teachers without musical experience in the experimental group, after exposure to MPIM. The differences were reflected in each of the aspects. The differences were reflected in particular in terms of: emotional, social, cognitive, motivational, achievement and general. These teachers are from the experimental group after the exposure to the MPIM pedagogical model.

Chart 3.20 below displays the differences between teachers with musical experience and teachers without musical experience- in every aspect of attitudes within the experimental group after exposing PMIM.

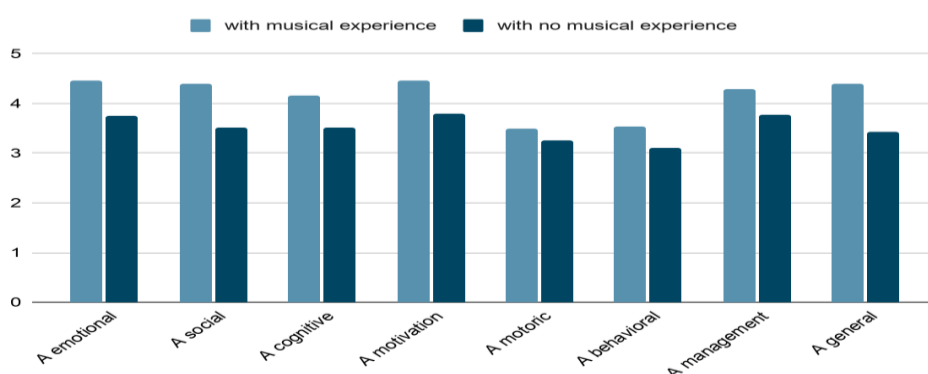


Chart 3.20: Effectiveness of teachers in the experimental group - with or without musical experience, after exposure to the PMIM pedagogical model

In terms of the effectiveness of music integration, the averages from the experimental group were compared before exposure to the MPIM pedagogical model, using the ANOVA technique.

Table 3.11: Differences in the effectiveness of teachers in the experimental group, with musical experience and no musical experience, before exposure to the MPIM pedagogical model

application of music integration of teachers with musical experience and teachers with no musical experience						
	Experience	N	Average	Std. Deviation	T	Sig. (2-tailed)
B-background	with	6	1.16	0.40	0.75	0.452
	with no	34	1.08	0.19	0.46	0.662
B-content	with	6	2.05	0.68	3.04	0.004
	with no	34	1.38	0.46	2.32	0.060
B-creative	with	6	2.00	0.89	3.07	0.004
	with no	34	1.26	0.46	1.96	0.101
B-outclass	with	6	1.16	0.20	1.47	0.149
	with no	34	1.07	0.13	1.07	0.324
B-external	with	6	1.22	0.27	3.26	0.002
	with no	34	1.02	0.09	1.71	0.144
B-performance	with	6	1.45	0.18	3.60	0.001
	with no	34	1.14	0.19	3.71	0.007
B-arts	with	6	1.50	0.31	3.57	0.001
	with no	34	1.10	0.23	2.93	0.026
B-open/close	with	6	1.41	0.58	0.56	0.578
	with no	34	1.29	0.47	0.48	0.644

Table 3.11 shows that in the experimental group, teachers with musical experience had more application of music integration, more than teachers without musical experience. The differences were reflected mainly in terms of content, creativity, external talent, performance, and arts integration.

Chart 3.21 below displays the differences between teachers with musical experience and teachers without musical experience- in every method of application of music integration within the experimental. These teachers are from the experimental group before the exposure to the MPIM pedagogical model.

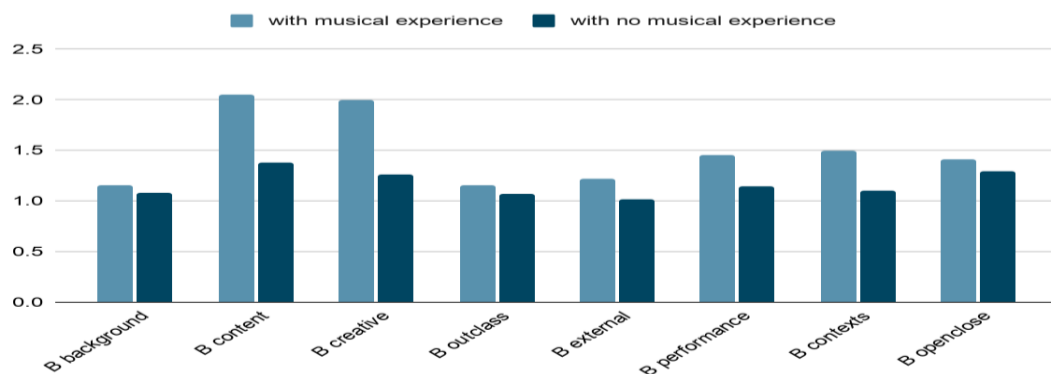


Chart 3.21: Teacher effectiveness - with or without musical experience, from the experimental group, before exposure to the PMIM pedagogical model

Further, the variance that compared the four categories of subjects according to the discipline taught was analyzed, in terms of parameters of attitude and effectiveness of music integration. Because significant differences were obtained, post-hoc Tukey tests were performed for multiple comparisons, which specifically identified the differences between the four groups.

The 4 subjects groups are:

A. Arabic and Hebrew

B. English

C. Math and Science.

D. Religion.

Table 3.12 below shows the mean and standard deviations and the results of the analysis of variance in the attitudes.

Table 3.12 variance in attitudes

Attitudes		N	Mean	Std. Deviation	F(3,76)	Significance
B-emotional	1.Arabic and Hebrew	28	2.1964	.91293	11.039***	,000
	2.English	12	2.3889	.46782		
	3. Math and science	32	1.5469	.26852		
	4. Religion	8	1.3333	.08909		
B-social	1.Arabic and Hebrew	28	2.1857	.73420	10.395***	,000
	2.English	12	2.3833	.35633		
	3. Math and science	32	1.7875	.35537		
	4. Religion	8	1.2750	.21213		
B-cognitive	1.Arabic and Hebrew	28	2.0422	.58941	18.534***	,000
	2.English	12	2.4318	.58548		
	3. Math and science	32	1.5057	.24539		
	4. Religion	8	1.3182	.10866		
B-motivation	1.Arabic and Hebrew	28	2.2286	.78072	14.524***	,000
	2.English	12	2.4833	.58127		
	3. Math and science	32	1.5938	.35735		
	4. Religion	8	1.2000	.21381		
B-motoric	1.Arabic and Hebrew	28	1.7232	.51072	3.428*	,021
	2.English	12	2.0417	.67279		
	3. Math and science	32	1.5938	.30288		
	4. Religion	8	1.5000	.29881		
B-behavioral	1.Arabic and Hebrew	28	1.9196	.58947	9.705***	,000
	2.English	12	2.3542	.48216		
	3. Math and science	32	1.6563	.32223		
	4. Religion	8	1.3750	.35355		
B-class management	1.Arabic and Hebrew	28	2.1518	.61741	5.949**	,001
	2.English	12	2.2500	.48850		

	3. Math and science	32	1.8906	.43039		
	4. Religion	8	1.4063	.35197		
	1. Arabic and Hebrew	28	2,1964	,91293		
	2. English	12	2,3889	,46782		
B-achievements	3. Math and science	32	1,5469	,26852	11.039***	,000
	4. Religion	8	1,3333	,08909		
	1. Arabic and Hebrew	28	1,9405	,69124		
	2. English	12	2,4722	,45965		
B-general	3. Math and science	32	1,7396	,40370	10.557***	,000
	4. Religion	8	1,2083	,17252		
	1. Arabic and Hebrew	28	1,9405	,69124		
	2. English	12	2,4722	,45965		

There are significant differences in teachers' attitudes between the groups of subjects in any of the researched aspects. Post hoc Tukey - type tests showed that the differences stem from the fact that the attitudes of teachers of math- science and religion, significantly lower than the attitudes of teachers of Arabic - Hebrew and English. These differences were found in all of the researched aspects.

Chart 3.22 below clarifies the differences between the attitudes of teachers of Arabic-Hebrew and English and the attitudes of teachers of Math-Science and Religion.

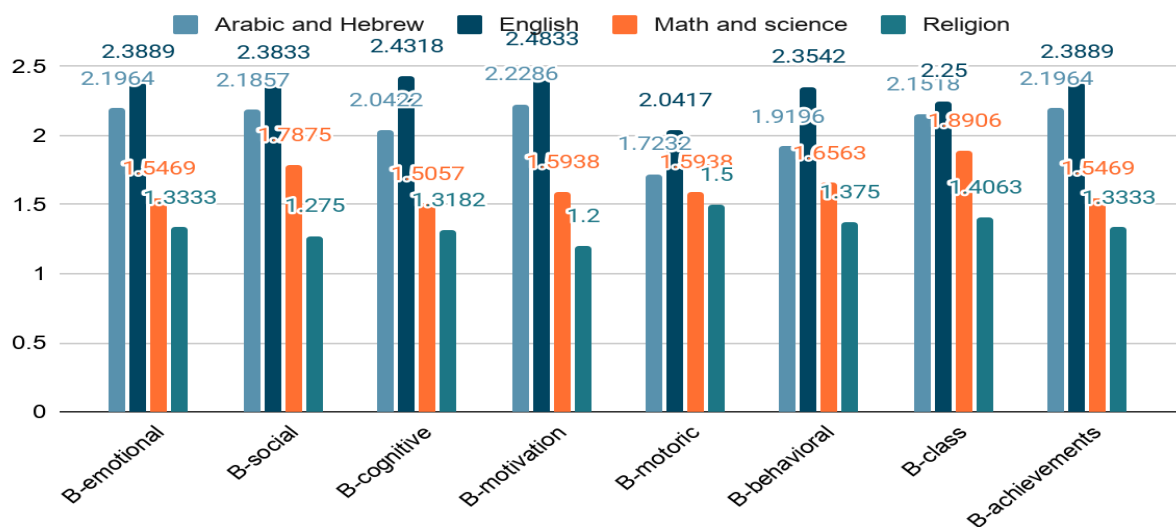


Chart 3.22. The level of teachers' attitudes, by group categories, depending on the discipline taught

Table 3.13 below shows the mean and standard deviations and the results of the analysis of variance in the application of music integration.

Table 3.13. Analysis of variances between groups of subjects according to the discipline taught at the level of teacher effectiveness

application of music integration		N	Mean	Std. Deviation	F(3,76)	Significance
B-background (background music)	1.Arabic and Hebrew	28	1.1429	.26726	1.361	.261
	2.English	12	1.1250	.22613		
	3. Math and science	32	1.0625	.16801		
	4. Religion	8	1.0000	.00000		
B-content	1.Arabic and Hebrew	28	1.4643	.57620	12.857	.000
	2.English	12	2.0000	.51247		
	3. Math and science	32	1.2083	.23570		
	4. Religion	8	1.0000	.00000		
B-creativity	1.Arabic and Hebrew	28	1.5179	.58503	6.795	.000
	2.English	12	1.3333	.65134		
	3. Math and science	32	1.0469	.14807		
	4. Religion	8	1.0000	.00000		
B-internal (outside the classroom)	1.Arabic and Hebrew	28	1.0714	.13363	1.812	.152
	2.English	12	1.1458	.16714		
	3. Math and science	32	1.0781	.14807		
	4. Religion	8	1.0000	.00000		
B-external	1.Arabic and Hebrew	28	1.0833	.17273	1.125	.344
	2.English	12	1.0000	.00000		
	3. Math and science	32	1.0729	.20275		
	4. Religion	8	1.0000	.00000		
B-performance	1.Arabic and Hebrew	28	1.2054	.20473	15.022	.000
	2.English	12	1.3542	.16714		
	3. Math and science	32	1.0547	.10500		
	4. Religion	8	1.0000	.00000		
B-arts	1.Arabic and Hebrew	28	1.1429	.29991	0.674	.571
	2.English	12	1.1250	.22613		
	3. Math and science	32	1.1094	.24542		
	4. Religion	8	1.0000	.00000		
B-open/close	1.Arabic and Hebrew	28	1.1429	.26726	22.183	.000
	2.English	12	1.9167	.55732		
	3. Math and science	32	1.1406	.26134		
	4. Religion	8	1.0000	.00000		
B-general	1.Arabic and Hebrew	28	1.1429	.26726	1.361	.261
	2.English	12	1.1250	.22613		
	3. Math and science	32	1.0625	.16801		
	4. Religion	8	1.0000	.00000		

There are significant differences in the effectiveness of teachers between groups of subjects in the following aspects: content, creativity, performance, and the use of music at the beginning and end of the lesson. Post hoc Tukey -type tests showed that the differences stem from the fact that the application of music integration of teachers of math- science and religion, significantly lower than the application of music integration of teachers of Arabic-Hebrew and English, in the mentioned aspects.

Chart 3.23 below displays the differences between application of music integration of teachers of Arabic-Hebrew and English and the application of music integration of teachers of Math-Science and Religion.

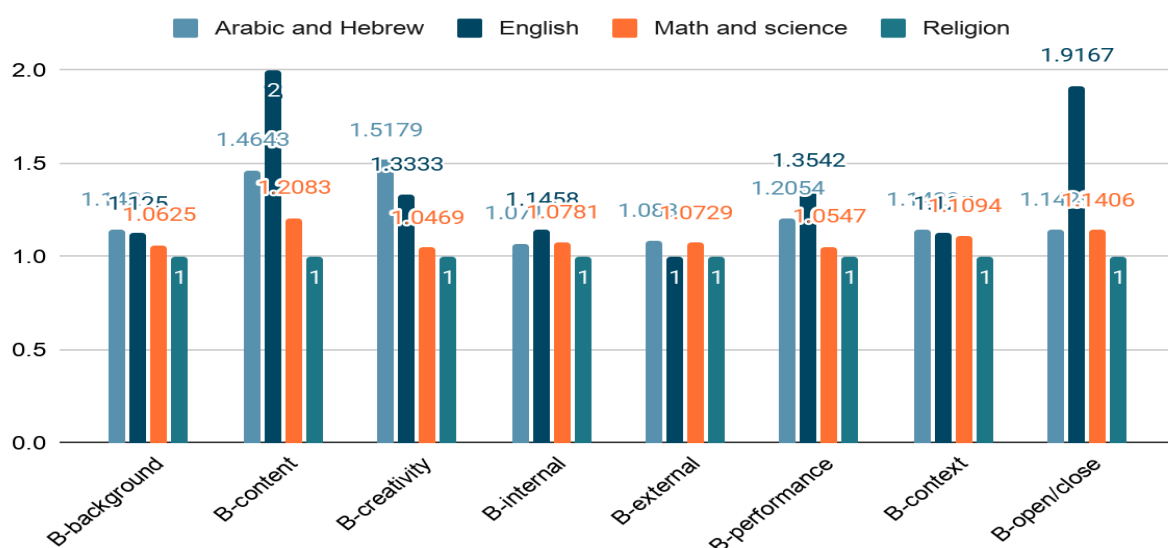


Chart 3.23. The level of effectiveness of teachers, by group categories, depending on the taught discipline

Table 3.14. Correlations between attitudes and effectiveness

application of music integration (before)		Background	Content	Creativity	Outclass
Attitudes (before)					
Emotional	Pearson Correlation	.374**	.750**	.595**	.410**
	Sig. (1-tailed)	.000	.000	.000	.000
	N	80	80	80	80
Social	Pearson Correlation	.464**	.701**	.506**	.346**
	Sig. (1-tailed)	.000	.000	.000	.001
	N	80	80	80	80
Cognitive	Pearson Correlation	.414**	.778**	.655**	.440**
	Sig. (1-tailed)	.000	.000	.000	.000
	N	80	80	80	80
Motivation	Pearson Correlation	.417**	.726**	.648**	.413**
	Sig. (1-tailed)	.000	.000	.000	.000
	N	80	80	80	80
Motoric	Pearson Correlation	.225*	.506**	.343**	.324**
	Sig. (1-tailed)	.023	.000	.001	.002
	N	80	80	80	80
Behavioral	Pearson Correlation	.359**	.632**	.506**	.333**
	Sig. (1-tailed)	.001	.000	.000	.001
	N	80	80	80	80
Classroom management	Pearson Correlation	.416**	.633**	.432**	.378**
	Sig. (1-tailed)	.000	.000	.000	.000
	N	80	80	80	80
Achievements	Pearson Correlation	.374**	.750**	.595**	.410**
	Sig. (1-tailed)	.000	.000	.000	.000
	N	80	80	80	80

General attitudes	Pearson Correlation	.333**	.687**	.502**	.380**
	Sig. (1-tailed)	.001	.000	.000	.000
	N	80	80	80	80

** . Correlation is significant at the 0.01 level (1-tailed).

* . Correlation is significant at the 0.05 level (1-tailed).

application of music integration (before) Attitudes (before)		External Talents	Performance	arts	Open/ Close
Emotional	Pearson Correlation	.200*	.626**	.370**	.489**
	Sig. (1-tailed)	.038	.000	.000	.000
	N	80	80	80	80
Social	Pearson Correlation	.292**	.619**	.438**	.415**
	Sig. (1-tailed)	.004	.000	.000	.000
	N	80	80	80	80
Cognitive	Pearson Correlation	.067	.655**	.282**	.568**
	Sig. (1-tailed)	.277	.000	.006	.000
	N	80	80	80	80
Motivation	Pearson Correlation	.133	.700**	.347**	.532**
	Sig. (1-tailed)	.119	.000	.001	.000
	N	80	80	80	80
Motoric	Pearson Correlation	.040	.318**	.251*	.440**
	Sig. (1-tailed)	.362	.002	.012	.000
	N	80	80	80	80
Behavioral	Pearson Correlation	.070	.630**	.364**	.499**
	Sig. (1-tailed)	.270	.000	.000	.000
	N	80	80	80	80
Classroom management	Pearson Correlation	.158	.494**	.329**	.435**
	Sig. (1-tailed)	.081	.000	.001	.000
	N	80	80	80	80
Achievements	Pearson Correlation	.071	.640**	.365**	.498**
	Sig. (1-tailed)	.172	.000	.000	.000
	N	80	80	80	80
General attitudes	Pearson Correlation	.183	.560**	.400**	.454**
	Sig. (1-tailed)	.052	.000	.000	.000
	N	80	80	80	80

** . Correlation is significant at the 0.01 level (1-tailed).

* . Correlation is significant at the 0.05 level (1-tailed).

The results showed that there is a significant positive relationship between teachers' attitudes toward music integration and the usage of the methods of music integration by the teachers.

It is noticeable that the correlation is at a very high level of significance (0.01).

3.3. CONCLUSIONS TO CHAPTER 3

3.3.1 Discussion and Validating Values

1. The first conclusion is concerned with the attitudes and application of music integration of elementary school teachers toward integrating music in teaching in the elementary school. After being exposed and using the pedagogical model (MPIM) teachers have more positive attitudes towards integrating music in teaching than before being exposed to the pedagogical model.

The attitudes of teachers in the experimental group got much higher after being exposed to the MPIM pedagogical model in all variable measures. This first hypothesis was found true. Teachers in the experimental group thought that there is no need to integrate music in teaching; they thought it was useless. After being exposed to the MPIM pedagogical model they thought it is very helpful and effective to use music in teaching. Teachers also said in the interviews that while being exposed to the MPIM pedagogical model they were exposed to the benefits and effectiveness of integrating music in teaching. In addition, they said that while applying the methods suggested in the classroom, they found out that integrating music in teaching is a useful way to make pupils get motivated, understand more, and internalize the taught subject. In addition, they said it contributes to the good relationships between pupils and teachers and between pupils themselves, makes pupils concentrate more in the lesson, lowers pupils' anxiety and tension.

Research indicates that once teachers have had training and experience in teaching through the arts, they become more interested in the arts as separate disciplines and come to value the role of the arts specialist [23].

As opposed to the experimental group, teachers in the control group had a little change in their attitudes. They think a little bit more positively towards the effectiveness of integrating music in teaching. This little change was aroused in the interviews. It was found the teachers in the control group had little more positive attitudes toward integrating music in teaching due to the feedback they heard from their colleagues who were in the experimental group in other schools in the village. Teachers in the control group said they had small talks with teachers who were exposed to a pedagogical model (MPIM), in other schools and heard some very positive attitudes about integrating music in their teaching. Furthermore, another explanation could be that the action of refilling the same questionnaire twice could make them familiar with the content of the questions and had a pre-thought about the effectiveness of integrating music in teaching.

This research suggests that integrating music courses should work on the perceived beliefs of elementary education teachers, some of whom will have great difficulty in leaving their prior beliefs behind [60]. If teachers' beliefs are not challenged when they enter an integrating music course, they may become frustrated and disillusioned because their expectations do not fit the reality they face. This will prevent them from acquiring skills necessary to function in the

classroom successfully [75]. Working through preconceived beliefs about teaching and learning acquired during childhood is very important to break the cycle that will drive these teachers' classroom practices [17; 16; 97].

Music teachers and classroom teachers who have been trained in traditional instructional methods cannot be expected to suddenly change their entire approach to teaching [17].

Teachers need time to gain confidence in planning and teaching integrated units without losing sight of instructional goals and objectives. Adequate professional development opportunities and collaborative planning time are important to facilitate this process of gradual school wide change. In addition to team planning among classroom teachers, it is found that “establishing new communications channels between classroom teachers and arts teachers is particularly crucial” [16]. That is why this research finds it very important to work in a discipline staff on the MPIM pedagogical model. And that is why it is very important to involve the music teacher in the process.

2. The second conclusion is concerned with the effect of using the MPIM on attitudes and application of music integration among the teachers. After being exposed to and using the pedagogical model (MPIM) teachers will have more application of music integration than before being exposed to the pedagogical model. The application of music integration methods of teachers in the experimental group got much higher after being exposed to the MPIM pedagogical model in all variable measures. This second hypothesis was found true. Teachers reported that they can't integrate music in their teaching. They thought it was very difficult and they didn't use methods of integrating music in their lessons. After being exposed to the MPIM pedagogical model they thought it was not so hard to integrate music in their lessons and they integrated music in their lessons. Teachers also said in the interviews that while being exposed to the pedagogical model they were exposed to methods and ways of integrating music in teaching that helped them to see that it is not so difficult. Colwell [25] found that having taken a music methods class, classroom teachers showed improved comfort at the thought of integrating music in the curriculum and yet demonstrated a decreased intention of integrating it within the curriculum.

Although teachers may satisfy the objectives of music integrating courses, such as developing skills and strategies of integrating music, it is their confidence that will determine if they implement music integration in their classrooms [14]. The likelihood of elementary education majors integrating music in their classrooms is contingent on their preparedness and perceived success in the methods class [17; 73]. Integrating music instructors should focus on those music concepts and activities that pre-service teachers would use in their classroom—because they feel that it is something that they can do [17]. Once preconceived beliefs are lifted and attitudes are

transformed, pre-service teachers will come to value music and eventually become our biggest advocates in promoting music in their future classrooms [19; 17].

Furthermore, teachers said that the fact that the pedagogical model of integrating music in teaching (MPIM) was formed and built with that staff of the discipline and the fact that the instructor (the researcher) was available to guide them in building the specific discipline model made them feel more able and use more music integration methods in teaching their specific subject.

Teachers in integrating music methods courses must develop the ability to integrate music in their classrooms [19; 54], confidence in making music [9; 60], and the capacity to cultivate positive attitudes through positive experiences [9; 14; 19; 117; 101] by learning in a safe and supportive environment where they are comfortable to publicly share and reflect on their personal beliefs and experiences [17; 117]. The subservient and social approaches to integration are the styles of choice among general education teachers because they conform to prevailing school goals. Music educators prefer the coequal style even though it is the most difficult to implement because it requires a new conceptualization of the discipline, which in turn necessitates a change in school structure [23; 17].

Music integration is neither easily nor quickly accomplished. Developing a meaningful integrated curriculum is a complex process in which all the stakeholders (teachers, students, parents, administrators, and the community) must be involved. Although it certainly can be useful to study successful programs and models, it is very important to recognize that each school has its own unique culture. Programs that are highly successful in one school may not be appropriate to another [16] that's why this research suggests that each school should fit the program to its inner school culture and build an integration program that is suitable for each staff and for the school in general.

Moreover, teachers in the experimental group reported that during the exposure to the program the instructor emphasized the ability to integrate music in teaching for every teacher.

In addition, they said that while applying the methods suggested in the classroom, they found out that integrating music in teaching is applicable, and they succeeded to integrate the various types of integrating music in teaching like using content songs, using background music, asking pupils to be creative and compose a song or make an instrument, ask pupils to play or to sing a song.

Integrating music courses must concentrate on the development of content knowledge, practical experiences, and good models of teaching so that teachers increase their application of music integration [69]. According to Woolfolk-Hoy and Burke-Spero [123], teachers with a higher sense of ability tend to feel a higher level of satisfaction with their preparation during their training

in a methods class. If teachers can develop a higher teaching sense of ability during the course, they will carry an attitude of satisfaction, confidence, and competence into their classroom. The more they teach, the more they will improve [17; 16; 111; 118].

In the interview teachers in the experimental group reported that the most interesting and effective method they found while applying to the program is integrating music outside the classroom. Such as playing music in the school break during the day or integrating music in “the individual hour” outside the class, or using the school website in integrating music.

In the observations, teachers who had participated in the experimental group had more positive attitudes and more confidence while applying music integration methods. They were able to use various methods in one lesson. Such as a content song, opening or ending song. These teachers also dedicated more time for music integration in the lesson.

Because classroom teachers spend the greatest amount of time with their students, their beliefs about music are evident by the quantity and quality of the music activities they use in their classrooms [81; 95]. They have a responsibility in making music learning a strong presence in their curriculum [92] because they have the most consistent influence over their students [8; 78]. According to researchers [3; 17] “opportunities for spontaneous music making and planned music within other daily curricular activities enhance the child’s learning . . . and when the daily inclusion of a special music play area is planned in the curriculum, it provides for both individual developmental differences, as well as focusing interest” [17].

Teachers in the experimental group didn’t use music integration a lot before the exposure to the program. They used the most, two methods. One is using content music in integrating music in the lesson. The second is using music in opening or closing the lesson. Teachers said it is the easiest way to integrate music in their teaching.

Bresler [22] found that most teachers were not comfortable teaching music, and that only a few teachers included music as part of their regular curriculum, and that singing and listening to music were the most common classroom musical activities [23].

Teachers’ efficiency in general was low in all the research population (except for teachers who had a musical background) before the exposure to the program MPIM. Abril and Gault [1] found that music plays a secondary role to other curricular activities. Malin [78] explains that several classroom teachers do not take music seriously as they do not view it as an important subject, nor do they view the music specialist as a professional. According to Weller [121], noncore subjects were considered ancillary and therefore were perceived with an attitude of devaluation [17].

Despite this finding, teachers in the experimental group showed a very high application of music integration and positive attitudes after applying the pedagogical model MPIM. This implies

that teachers have many musical abilities and talents, but they don't know about them. Apfelstadt [5] states that subjects felt that singing was perceived as a very personal activity and oftentimes cited a feeling of embarrassment or self-consciousness about their singing ability [17].

That's why it is very important to develop the music talents of teachers. Helping teachers understand the value and importance of music in the lives of not only their pupil, but their own, encourages them to apply the knowledge and skills they learn in the introductory methods course in their own classrooms [112]. The difficult task is to assure the teachers that they can succeed in such a class despite their apprehension [50]. Richards [101] states that we need to "work to help pre-service teachers develop not only skills in music but also confidence in their own musical abilities and teaching skills . . . in a way that does not diminish their musical enjoyment" [17, p. 7].

As opposed to the experimental group, teachers in the control group did not have a change in their application of music integration. Without being exposed to the MPIM pedagogical model and applying, they still feel they are not able to integrate music in their teaching.

Enhancing teachers' sense of ability is one of the first steps in developing the right combination of skills, knowledge, and dispositions to integrate music in teaching [118]. Many elementary teachers bring a limited musical background and knowledge to the music methods course, which prevents them from developing positive levels of application of integrating music [17; 69].

3. The third conclusion is concerned with nine dimensions of teachers' attitudes and nine dimensions of teachers' application of music integration methods, and the music experience of the teacher. There is a positive correlation between teachers' musical education and experience - and their attitudes towards integration of music in teaching in all measures and in the application of music integration methods.

This hypothesis was significantly proved. Teachers who had a previous musical education had more positive attitudes and higher application of music integration in teaching.

Teachers in the experimental group with musical background had more positive attitudes than teachers who didn't have a musical background' even before exposure to the MPIM pedagogical model.

In the observations, teachers who had a previous musical education applied the music integration method with more confidence and feeling free to be creative and dedicated more time for music integration in the lesson. Some of them played on musical instruments during the lesson, and sang together with the pupils.

This finding is logical, since teachers had a music background, they could see the effectiveness of integrating music in teaching. Also, they feel more able to apply something they are familiar with and know before.

Researchers found that teachers who have had prior musical experiences as children believe that music is a valuable subject in the school curriculum [19; 32].

*This finding emphasizes the major importance of supplying courses and pedagogical models of integrating music in teaching (MPIM) to teachers in schools.

4. The fourth conclusion is concerned with the relationship between teachers' education, teaching field, and their attitudes toward integrating music in didactic disciplines, and their application of music integration methods by mentioned techniques. There is a significant difference between the attitudes and application of music integration of teachers of languages, and science, math, and religion teachers towards integrating music in teaching.

There is a significant difference between attitudes and application of music integration of math, science and religion teachers, and attitudes and application of music integration of language teachers.

This hypothesis was also significantly proved. Teachers who teach languages had more positive attitudes and higher application of music integration in teaching, than teachers who teach math, science, and religion in all measures.

Teachers of languages in the experimental group had more positive attitudes and higher application of music integration than teachers of math science and religion even before exposure to the MPIM.

After exposure to MPIM teachers of math, science and religion had more positive attitudes and higher application of music integration than before the exposure to MPIM.

In the interviews these teachers explain that the curriculum of the disciplines lack content songs or any other integrating music in teaching. This finding implies that teachers of math, science and religion lack methods of integrating music and are not familiar with this teaching method.

The lowest attitudes and application of music integration of all teachers were the teachers who teach religion. This finding is logical since all the teachers of religion in these schools teach Islam religion. Islam religion forbids music in general [107].

Therefore, teachers of religion avoid using music in teaching religion. These explanations became clearer and more intense in the interviews with the religion teachers.

In the observations, teachers who integrated music in math lesson, had difficulty in doing that, they were not confident in their tone of speech, and had little time for music integration in the lesson. In addition, teachers of religion was hesitating while giving the instructions for the pupils in order to sing a song or playing the beat of the song.

These findings emphasize the importance of taking this dilemma into account while teaching teachers how to integrate music in their teaching. One suggestion could be to suit a special music integration program to the Islam religion and to involve an acceptable way of using music in Islam religion, like: Tajweed (Quran reading), music without melody (only percussion), Athan (prayer call), playing on percussion instruments and not string instruments.

5. **The fifth conclusion** is regarding the relation between attitudes and the application of music integration of teachers. There is a positive correlation between attitudes and the application of music integration of teachers regarding integrating music in teaching.

This hypothesis was found true. Teachers who had positive attitudes had a high application of music integration methods, and teachers who had high application of music integration had more positive attitudes in all measures in experimental and control groups.

An integrated curriculum in which music and other subject areas are included and honored in a meaningful and appropriate manner provides a rich, comprehensive learning experience that can cross boundaries of culture and individual student differences, resulting in a productive and highly motivating experience for learners and yielding unique opportunities for teachers. Integration is not easily achieved, but this approach offers academic and affective benefits for students and teachers [18; 17; 16]. Integrated curriculum is a challenging but important topic that should be addressed more thoroughly within the music teacher education curriculum and the literature.

Although short-term arts integration workshops can have limited benefits, substantive change requires a long-term commitment on the part of the arts teachers, other teachers, and especially the building principal. Ongoing training [6; 15] and regular dedicated planning time to foster meaningful collaboration between arts specialists and grade level teachers are needed to bring about effective and meaningful curricular integration [16], National Arts Education Consortium, 2002, [15]

In the interviews, a dilemma was aroused. Teachers' approach was that we use music to teach our lessons, but we don't really care that pupils learn music. Indeed Bresler [23] says that it is a controversial topic among music teachers who may fear that music (and music teachers) will be placed in a subservient role to other subjects. In these situations, music may be viewed as a useful tool for teaching other subjects, but the intrinsic value of music education is disregarded [23].

In the observations, teachers who had positive attitudes applied the music integration method with more confidence and feeling free to be creative and had more time for music integration in the lesson.

“The lack of formal requirements (e.g. guidelines, testing) and materials (e.g. resource books and textbooks) means that integration is the teacher’s (or team’s) problem and is left to their initiative, imagination and resourcefulness”.

That’s why it is very important to build a systemic school program adjusted to the school culture and needs.

In this research it noted recommendations and suggestions to follow research to confirm all the goals and hypotheses in the larger population. I would like to do research with a larger number of participants.

6. The sixth conclusion is regarding the conditions in which teachers could be in order to help teachers to have more positive attitudes and higher effectiveness in using music integrating in teaching. These conditions are held in the MPIM pedagogical model that helped teachers to have more positive attitudes and higher effectiveness are:

1. Taking an "integrating music course", in which they were exposed to all the integration methods that they should use in their teaching as it was detailed before.

2. Forming a management team (which includes coordinators for each discipline) that build a schoolwork-plan for music integration which is presented in table I.

3. The fact that each coordinator of each discipline built a professional program with the disciplinary team: Arabic, English, Hebrew, mathematical science and religion. The programs included suggestions that the researcher gave to the team. And all the programs included all music integration ways that are checked in the research.

4. The involvement of the music teacher at the school and the supervision of the author of this research was a helpful action.

All these conditions give the teachers a higher sense of ability and more positive attitudes toward integrating music in teaching.

3.3.2 Disadvantages of the research:

In this research it could be found some disadvantages that could make them better. If the research would have taken more subjects in the experimental and control groups, it would have reflected the subject in an extended way with more reliable results.

Furthermore, questionnaires and interviews could also be run to pupils, not only teachers.

This will help to clarify and light up more sides and dimensions of integrating music in teaching.

Moreover, the study can include more parameters to the questionnaires. That will enable answering more hypotheses and implementing more conclusions that will reflect the Arab sector more. Also adding observations of the researcher to integrating music lessons is necessary to understand and a holistic view of the integration of music in teaching.

In addition, there is a possibility to extend the target population and check other groups of teachers like teachers of 1st and 2nd grade, or teachers of junior high school and high school teachers compared to other schools in order to compare between all the results and have higher reliability and validity to the research.

1. Interpretation of Table 3.5 – Attitudes of the Experimental Group

In the experimental group (EG), a positive and statistically significant trend is observed across all nine attitude categories. The mean scores increased from initial values ranging between 1.75 and 2.41 to final values ranging between 3.16 and 3.91. The most substantial increases in mean scores were recorded for the following dimensions: **cognitive attitude**, which increased from 1.89 to 3.62; **emotional attitude**, with an increase of 1.84 points; **motivation**, which increased from 2.09 to 3.90; **achievement**, with an increase of 1.89 points; and **classroom management**, which increased from 2.09 to 3.86.

The *t*-test values are very high, and statistical significance of $p < 0.001$ is reported for all dimensions, indicating that the differences between the initial and final assessments are statistically significant.

The implementation of the pedagogical model was therefore associated with a consistent and statistically significant change in participants' attitudes in the EG, encompassing cognitive and motivational dimensions as well as emotional, behavioural, and managerial dimensions.

2. Interpretation of Table 6 – Attitudes of the Control Group

In the control group (CG), the observed development is considerably more modest. For most dimensions, the differences between the initial and final assessments do not reach the threshold of statistical significance. No statistically significant differences were identified for the following dimensions: **emotional** ($p = 0.412$), **social** ($p = 0.337$), **methodological** ($p = 0.160$), **classroom management** ($p = 0.218$), **achievement** ($p = 0.413$), and **general personal attitudes** ($p = 0.378$).

Statistically significant differences were identified for the **cognitive** dimension ($p = 0.001$), **motivation** ($p = 0.032$), and **behavioural** dimension ($p = 0.001$); however, the magnitude of these changes was smaller than that observed in the EG.

The CG thus exhibited some changes over the period under investigation, but these changes were not generalised across all dimensions. The fact that most dimensions did not demonstrate statistically significant differences contrasts markedly with the results obtained for the EG.

3. Interpretation of Table 7 – Perceived Efficacy in the Experimental Group

The findings concerning perceived efficacy are particularly relevant. In the EG, all nine dimensions demonstrated statistically significant increases, with $p < 0.001$. The increases were substantial across the following dimensions: **experience**, with an increase of 2.24 points; **content**, 1.69 points; **creativity**, 1.44 points; **progress**, 1.83 points; **external factors**, 1.61 points;

performance, 1.10 points; **arts**, 1.74 points; **beginning/end**, 1.74 points; and **overall sense of ability**, 2.24 points.

The largest increases were recorded for **experience** and **overall sense of ability** (+2.24), followed by **progress**, **arts**, and **beginning/end** (+1.74). These findings demonstrate a substantial improvement in the perceived efficacy of participants in the EG, suggesting that exposure to the pedagogical model was accompanied by an enhanced perceived ability to integrate musical activities into the instructional process.

4. Interpretation of Table 8 – Perceived Efficacy in the Control Group

In the CG, increases between the initial and final measurements were also observed; however, their magnitude was considerably smaller than that recorded in the EG. For example, **experience** increased from 1.08 to 1.30, while **content** increased from 1.30 to 1.41.

Statistical significance varied across the dimensions. For **content**, the difference was not statistically significant ($p = 0.074$), whereas the remaining dimensions were reported as having p -values below 0.05. Thus, the changes observed in the CG were more isolated and of smaller magnitude compared with those identified in the EG.

Taken together, Tables 5–8 reveal a clear difference between the dynamics of the EG and those of the CG. In the EG, following exposure to the **Pedagogical Model for the Integration of Musical Activities into the Teaching of Other Subjects**, substantial and statistically significant increases were observed in both attitudes and perceived efficacy, with all investigated dimensions showing higher final than initial scores.

In the CG, although some increases were observed, they were smaller in magnitude and less consistent, while differences across several attitude dimensions did not reach statistical significance.

Overall, the findings provide empirical support for an association between the implementation of the **Pedagogical Model** and improvements in both participants' attitudes and their perceived efficacy in the experimental group. The differences in the patterns of change between the EG and CG constitute an important empirical argument supporting the effectiveness of the model under investigation.

Nevertheless, in order to draw a firm causal conclusion, it would also be useful to report the direct differences between the EG and CG at post-test, as well as measures of effect size (e.g., **Cohen's d**). This is because the t -values for the **pre-test–post-test comparisons** demonstrate change within each group but do not directly compare the two groups.

GENERAL CONCLUSIONS

It has been established that the concept of curricular integration, understood as a process of establishing convergence realities at the level of elements (content, concepts, values), is focused on:

- **horizontal integration**, which brings together in a coherent whole two or more study objects belonging to different curricular domains or areas.

- **vertical integration**, which brings together in a coherent whole two or more study objects belonging to the same curricular domain or area.

- **transversal integration**, which involves focusing on a theme/problem that does not come from existing disciplines, has a certain autonomy in relation to them, but can engage them on certain segments in studying aspects of the theme in question.

1. The structural content of the integration of music in primary education subjects covers three important components:

- *cognitive component* - "learning to know" knowledge of self-planning, self-organization, self-evaluation and self-counseling of the learning activity aimed at identifying the learning goal, designing the activity, executing actions and obtaining the result;

- *behavioral component* - "knowing to do" capacities/skills of self-planning, self-organization, self-evaluation and self-counseling of the learning activity focused on identifying/accepting a learning goal, designing the activity and executing actions in obtaining the personal result, expressed in a quality behavioral change;

- *attitudinal component* - attitudes "knowing how to become" updated and uniquely valorized in a continuous process of self-planning, self-organization, self-evaluation and self-counseling, oriented towards identifying/accepting a learning goal, designing and executing relevant actions to record a personal result expressed in a quality behavioral change.

2. It has been demonstrated that the cognitive, affective and behavioral aspects of students in primary education in the curricular context are focused on *interdisciplinarity, multidisciplinary, interdisciplinary, transdisciplinarity and the integration of music as an artistic phenomenon*.

3. The integration of educational methodologies and music education is not limited to the development of new methods, technologies and techniques to stimulate the formation of artistic-aesthetic culture in students, but involves the value and reconceptualization of existing methodologies, excluding the inhibiting factors. The engine of training students in the elements of musical culture is the methodology designed on the interaction of education and musical education, validated by: the principles of interaction and syncretism of the arts.

4. The training experiment aimed at ensuring that the students' activity was interactive both

in relation to the musical works studied and to the elements of musical culture that they would be trained in. A system of formative exercises and didactic tests of a formative-evaluative nature applied sequentially from the perspective of ensuring an interdisciplinary interference between the methodologies was put into experimental value.

5. It was demonstrated that the integration of music into primary education subjects cannot be learned theoretically, but must be lived and experienced directly. Beyond teaching the necessary knowledge, education must focus on the formation of attitudes, taste, character and lifestyle focused on the entire human condition.

6. The pedagogical experiment was carried out within the framework of school and extracurricular activities, within the Program music integration in the teaching of other subjects in primary education, with an emphasis on didactic competence, valuing the main criteria for evaluating the educational process, which included: students' reactions to the established norms of conduct, the manifestation of responsibility and duty; for parents, the evaluation focused on the level of understanding of the particularities of school age, awareness of the education characteristics and their motivation in integrating music into primary education subjects.

7. The ascertaining experiment showed that, in general, teachers make connections between ELA and EM, but these are sporadic, scientifically unfounded and have an insignificant educational effect. Teachers do not know the epistemic and theoretical foundations of the interaction and syncretism of the arts, they do not possess methodologies for achieving in an organized educational framework the interactions of some directions of music.

8. Significant values of experimental training are the real and possible levels of interaction of the elements of the students' musical culture, under the conditions of applying an interactive instructional-educational methodology: starting from these levels, it is possible to design more efficient teaching-learning tools and to carry out a unitary and multi-purpose integrated process, students benefiting from training, development and training of the elements of elementary music; increasing the professionalism of teachers, as well as the aspects that need to be approached globally, interactively and syncretically in their professional training.

9. Experimental validation of the Pedagogical Model for integrating music into the teaching of other subjects in primary education focused primarily, on the one hand, on the relevant principles for streamlining the student learning process based on the principles of integrating music into primary education subjects.

10. The research demonstrates its practical relevance by addressing the scientific problem of integrating music into primary school subjects through the synthesis of psychological and pedagogical theories. Furthermore, the implementation of the Pedagogical Model and the Music Integration Program in the teaching of other subjects contributed to the effectiveness of teachers'

professional preparation for integrating music into primary education.

Recommendations:

1. The functionality of the Pedagogical Model and the Music Integration Program, as well as the results of the experiment, offer the authors of educational policies and curriculum designers, school principals, music directors, suggestions for improving the teaching methods of teachers with a music integration character in the middle school level of education.

2. The system and process of teacher training should be restructured in line with the reconsideration of educational policies regarding music integration with a focus on improving teachers' effectiveness and attitudes towards integrating music into the teaching of other school subjects.

3. The strategy for training the teacher's didactic competence, as well as the Pedagogical Model developed in this key and its implementation Program can be applied in higher education institutions for the initial training of teachers in the initial professional training of the teacher in any specialty.

4. Epistemological benchmarks of music integration in teaching in terms of teachers' attitudes and effectiveness how to use music in the teaching process with examples from different disciplines, provides opportunities to practice in a safe area, encourages teachers by giving them the opportunity to learn among peers, providing them with tools for the integration of music, to have a music teacher to accompany the process.

BIBLIOGRAPHY

In Romanian:

1. ANDRIȚCHI, V.; STRATAN, V. *Evaluarea competențelor școlare din perspectiva principiului integralității*: Cadrul didactic – promotor al politicilor educaționale. Chișinău: 11-12 octombrie 2019. 434-439 p.
2. ARISTOTEL. *Etica nicomahică*. București: Edit. Științifică și Enciclopedică, 1988.
3. ATRASH-JUCAN, A. *Influența muzicii asupra sănătății persoanelor de vârstă a treia*: Conferința regională a pensionarilor, Daburya, Israel. Daburya, 2013.
4. AUGUSTIN. *De musica*. In *Patrologia Latina*, vol. 32, tomus primus. Paris: J.-P. Migne, 1841. Augustin. *De cura pro mortuis gerenda liber unus*. In *Patrologia latina*, vol. 40, tomus sextus. Paris: J.-P. Migne, 1841.
5. BÎRZEA, C. *Arta și știința educației*, București: Editura didactică și pedagogică, 1995. 218 p.
6. BOROZAN, Maia.; ȘOVA, Tatiana; BĂLȚAT, Larisa. *Psihologia emoțiilor*, Chișinău: S.n., 2016, Tipografia UPS „Ion Creangă”, 204 p. ISBN 978-9975-46-307-2.
7. BREAZU, M. *Cunoașterea artistică*. București: Academia Română, 1960. 314 p.
8. BREAZUL, G. *Educația muzicală în școală primară*. In: *Revista pedagogică*, Caietul 2, 1938. p. 32-37.
9. BULARGA, T. *Psihopedagogia interesului pentru muzică*. Chișinău: Elena V.I., 2008. 88 p.
10. BURZA, L.; RUS, M. *Proiectarea lecțiilor interdisciplinare. Modalități, realizare pas cu pas*. In: *Educația Secolului XXI. Materialele simp. Interjudețean*. Turda, 2007, ed. 1-a, p. 93-96.
11. BUTNARI, N. *Repere teoretice și metodologice de dezvoltare a inteligenței spirituale la cadrele didactice universitare*. Teza de doctor, 2022.
12. CALLO, T. *“O pedagogie a integralității. Teorie și practică”*. Chișinău: CEP USM, 2007. ISBN 978-9975-70-161-7.
13. CARTALEANU, T.; COSOVANU, O. *“Atelierul de lectură în demersul educațional”*. Centrul Editorial PRO Didactica, 2004, 67 p. ISBN 9759850-1-7.
14. CĂLIN, M. *“Teoria educației”*, Editura AII, București, 1996, 110 p.
15. CERGHIT, I. *“Metode de învățământ”*. Iași: Editura Polirom, 2006, 320 p. ISBN 973-46-0175-X.
16. CHIȘ V.; IONESCU M. *“Fundamentări teoretice și abordări praxiologice în științele educației.”* Cluj-Napoca: Editura Eikon, 2009, 434 p., ISBN 978-9975-78-524-2.
17. CIOLAN, L. *“Învățarea integrată. Fundamente pentru un curriculum transdisciplinar”*. Iași: Polirom, 2008. 280 p. ISBN : 978-973-461-034-1.
18. CIUREA, Rodica, DUMITRU, Salade. *“Educația prin artă și literatură*, Editura Didactică și

- Pedagogică”, București, 1973, p.19- 21.
19. COJOCARU-BOROZAN, M. “*Formarea continuă a culturii emoționale la profesorii școlari*”. Seminarii metodologice. Ch.: Tipografia UPS “I. Creangă”, 2010. 42 p
 20. COSUMOV, M. “*Tema pe acasă la educația muzicală ca element al curriculumului disciplinar*”: Autoref. tezei de dr. șt. pedagogice. Bălți: USARB, 2012. 30 p.
 21. COSUMOV, Marina. “*Dimensiuni conceptuale ale evaluării competențelor artistice în contextul educației și învățământului extrașcolar din Republica Moldova*”, în: Geniu, Talent, Creativitate - o perspectivă psihopedagogică, vol. II, coordonator Marilena Rusu, Editura Performantica Iași 2022, p. 9, ISBN 978-606-685-906-6.
 22. COSUMOV, Marina. “*Orientări axiologice ale educației prin artă în contextul noilor educații*”. În: Materialele Conferinței Științifice Internaționale: Creativitatea – perspective psihopedagogice, Iași, România, 2016,p. 248-256. ISBN 978-973-148-234-7.
 23. CRISTEA, Sorin; BOROZAN, Maia; SADOVEI, Larisa; PAPUC, L. “[Metodologia proiectării și elaborării textului științific al tezei de doctorat. În: Teoria și praxiologia cercetării pedagogice”. București, Editura Didactică și Pedagogică, 2016, 306 p. ISBN 978-606-31-0184-7.
 24. CRIȘCIUC, V. “Specificul strategiilor de predare a cunoștințelor muzicale (în cadrul disciplinei educația muzicală)”: Autoref. tezei de dr. șt. pedagogice. Bălți: USARB, 2013. 30 p
 25. CRIȘCIUC, Viorica; GAGIM, Ion. “Teoria și metodologia predării cunoștințelor muzicale. Chișinău: Editura Pontos, 2016. 256 p. ISBN 978-9975-51-780-5.
 26. D’HAINAUT, L.(Coord.), “*Programe de învățământ și educație permanentă*”, București, Editura Didactică și Pedagogică, 1981.
 27. DANDARA O. “Interdisciplinaritatea în context curricular: constatări și sugestii”. In: Didactica Pro, 2002, nr 3-4(13-14), p. 47-49.
 28. DARAWSHA, Ahlam. “Dinamica motivației de învățare la elevii claselor primare din Israel (Sectorul Arab)”, Autoref. tezei de dr. șt. pedagogice C.Z.U.: 373.3.091(569.4) (043.3), 32 p. 2019.
 29. DELION, P. Metodica educației muzicale. Chișinău: Hyperion, 1993. 187 p.
 30. DRĂGHICECU, Dumitru. “*Din psihologia poporului român*”, Editura Historia, București, 2006, ISBN: 9738792364.
 31. GAGIM, I. “*Ce este muzica și cum s-o înțelegem?*” Bălți: USARB, 2019. 290 p. ISBN 978-9975-3316-0-9.
 32. GAGIM I.; CROITORU, S. “*Educație muzicală*”. Manual pentru cl. a IV-a. Chișinău : Știința, 2013. 144 p. ISBN ISBN 978-9975-85-062-9.

33. GAGIM, Ion. “*Dimensiunea psihologică a muzicii.*” Iași, Editura Timpul, 2003. – 280 p. ISBN 973-612-049-X.
34. GAGIM, Ion. “*Știința și arta educației muzicale.*” Chișinău, Editura ARC, 1997 – I ediție, 2004 – a II ediție, 2007 – a III ediție. – 222 p. ISBN 978-9975-61-423-8.
35. GAGIM, I.; BORȘ, A.; MORARI, M.; COROI, E. “*Educație muzicală.*” Manual pentru cl. 7-8. Chișinău: Știința, 2012. 152 p. ISBN 978-9975-67-829-2.
36. GAGIM, I.; CRIȘCIUC, V. “*Teoria și metodologia predării cunoștințelor muzicale.*” Editura Pontos, Chișinău, 2016, 256 p. ISBN 978-9975-51-780-5.
37. GAGIM, I.; MORARI, M. “*Educație muzicală.*” Manual pentru clasa a I-a. Chișinău: Știința, 2013. 47 p. ISBN 978-9975-67-915-2.
38. GAGIM, Ion. “*Fundamente pedagogice și psihologice și muzicologice ale educației muzicale.*” Spec. 13.00.01. Pedagogie generală: ref. șt. de dr. habilitat în baza lucrărilor publicate în pedagogie / Ion Gagim; Univ. de Stat din Moldova. Chișinău, 2004. 56 p.
39. GAGIM, Ion. “*Muzica – o mare pedagogie.*” În: Grigore VIERU. Ștefan ANDRONIC. SĂ TRĂIASCĂ VISELE. Chișinău. Ed: Pontos, 2016. 241-246 p. ISBN 978-9975-51-753-9.
40. GAGIM, Ion. “*Studii de Filosofia Educației.*” Bălți: Editura USARB, 2017. – 160 p. ISBN 978-9975-50-191-0.
41. GÎNJU, T. “Interacțiunea metodelor de educație literar-artistică - educație muzicală în formarea culturii artistic-estetice a elevilor claselor primare,” Teză de doctor în științe pedagogice, 2019C.Z.U: 373.3.015(043.3)
42. GOLEMAN, Daniel. “*Inteligența emoțională, cheia succesului în viață,*” Editura Allfa, București, 2004, p. 318, ISBN: 973 849 7629.
43. GORAȘ-POSTICĂ, V. “Formarea competențelor prin intermediul metodelor interactive de predare-învățare-evaluare. În: Formarea de competențe prin strategii didactice interactive”. Chișinău: Centrul Educațional PRO DIDACTICA, 2008. 204 p. ISBN 978-9975-9763-4-3
44. GUȚU, VL.; VICOL M. “*Învățământul centrat pe competențe: abordare teleologică.*” În: Didactica Pro. Revistă de teorie și practică educațională, nr. 1 (65), 2011, p. 2.
45. HEGEL, Georg William Friedrich. *Știința logicii. În 3 părți. T.1* (Moscova: Mysl, 1970. — (Academia de Științe URSS. Institutul de Filosofie. Patrimoniul filosofic).
46. ILICIEV, M. “Abordarea teoretică a inteligenței sociale în contextul gender”. În: Perspectivele și Problemele Integrării în Spațiul European al Cercetării și Educației. Vol.2, 7 iunie 2018. Cahul, Republica Moldova: Universitatea de Stat „Bogdan Petriceicu Hașdeu” din Cahul, 2018, pp. 75-79. ISBN 978-9975-88-042-8.
47. JOIȚA, E. “*Metodologia educației.*” Iași: Editura Institutul European, 2010. ISBN 978-973-611-661-2.

48. KANT, I. "Critica facultății de judecare. București: Științifică și Enciclopedică", 1981. 571 p.
49. NASTASIU, S. "Abordări teoretice ale competenței de comunicare interpersonală. În: Integrare prin cercetare și inovare. Științe sociale. Rezumate ale comunicărilor". 8-9 noiembrie 2018. Chișinău, Republica Moldova: CEP USM, 2018, 2018, pp. 299-303
50. NEACȘU, I. "Metode și tehnici de învățare eficientă. Fundamente și practici de succes". București: Polirom, 2014, 320 p.
51. PATRAȘCU, D. "Tehnologii educaționale. Chișinău: Tipografia Centrală", 2005.
52. PESTALOZZI, J.H. (1977). "Cum își învață Gertruda copii". București: E.D.P. 152 p.
53. PETROVSCHI, N., "Integrarea – o nouă abordare a perspectivelor cunoașterii în procesul educațional". In: Revista Univers Pedagogic, nr. 1 (65) 2020, pp. 3-6. ISSN 1 811-5470.
54. POPESCU-NEVEANU, P. "Dicționar de psihologie". Albatros. 1978. București. 784 p.
55. SADOVEI, L. (coord.), BOROZAN M. (coord.) et al. "Contribuții pedagogice de transfer inovațional pentru renovarea paradigmei educației contemporane". Monografie. Chișinău, Tipogr. „Garomont-Studio”, 2019. 336 p. ISBN 978-9975-134-86-6.
56. SADOVEI, L. "Abordarea comunicării din perspectiva teoriei organizaționale". În: Vector European, 2022, nr. 2, pp. 117-121. ISSN 2345-1106.
57. SALADE, D. (1998). "Dimensiuni ale educației". București: E.D.P. 232 p.
58. SILISTRARU, N. "Mediul etnic și social al educatului. În: Învățământul postmodern: eficiență și funcționalitate: Materialele Conferinței științifice internaționale", 15 noiembrie 2013. Chișinău: CEP USM, 2014, pp.58-62. ISBN 978-9975-71-513-3.
59. SILISTRARU, Nicolae. "Etnopedagogie și educație: Monografie", Universitatea de Stat din Tiraspol, Chișinău 2021, p.19-48, ISBN 978-9975-76-295-3.
60. STOICA, M. "Pedagogie și psihologie", Craiova: Editura Gheorghe Alexandru, 2001
61. SULIȚEANU, Ghizela. "Psihologia folclorului muzical", Editura Academiei, București, 1980, p. 17-22.
62. VACARCIUC, M. (2016), "Teoria elementară a muzicii", (Tipogr. „Garomont-Studio”), 96 p. ISMN 979-0-3480-0255-2.
63. VACARCIUC, Mariana. "Dimensiunea spirituală a cântului", Universitatea Pedagogică de Stat „Ion Creangă”, Ed. A 2-a, Tipografia „Garomont-Studio”, Chișinău 2017, ISBN 978 9975-136-44-0.
64. VASILE, V.; BABII V. "Aptitudini muzicale: realitate și deziderate", În: Studia Universitatis Moldaviae (Seria Științe ale Educației) Nr. 9(39) / 2010 / ISSN 1857-2103, 2013.
65. VASILE, Vasile. "Metodica educației muzicale", Editura Muzicală, 2004, p. 22.

66. VIERU, Nicolai. "Premisele constituirii primelor manifestări ale limbajului muzical folcloric, în: Conferința științifico-practică internațională Educația artistică în contemporaneitate: realizări , provocări, perspective", Bălți, 2022.
67. VÎGOTSKI, Lev. S. "Psihologia artei", Editura Univers, București, 1973
68. ZLATE M. "*Psihologia mecanismelor cognitive*". Iași: Polirom, 1999. 528 p

In English:

69. ABBET, J.P. Rôle des compétences sociales et sens de leur interactivité dans la formation : quelles implications pour la recherche et les pratiques pédagogiques ? Dans: Éducation et Socialisation. 2016, 41. Disponibil: <https://doi.org/10.4000/edso.1709>
70. ABRIL, C. R. & GAULT, B. M. "*Elementary educators' perceptions of elementary general music instructional goals:*" Bulletin of the Council for Research in Music Education. Illinois: University of Illinois, 2005. 61–69 p.
71. AL-AYOUB, Z.; ELIWAH, S.; AL-GARALLEH, F. "Social Intelligence and its Relationship with Communication Skills among Physical Education Students at Jordanian Universities". In: Dirasat: Educational Sciences. 2022, 49(1), 283–298." Disponibil: <https://doi.org/10.35516/edu.v49i1.719>
72. ALDRUP, K.; CARSTENSEN, B.; KÖLLER, M. M.; KLUSMANN, U. "Measuring teachers' social-emotional competence: development and validation of a situational judgment test". In: Frontiers in Psychology. 2020, 11. Disponibil: <https://doi.org/10.3389/fpsyg.2020.00892>
73. AL-HAJ M. "*Education among Arabs in Israel, control and social change*". Jerusalem: Hebrew University, 1996. 254 p. 66.
74. AN, S.; CAPRARO, M. M.; TILLMAN, D. A. 2013. "*Elementary Teachers Integrate Music Activities Into Regular Mathematics Lessons: Effects on Students Mathematical Abilities*": Journal for Learning Through the Arts. California: Journal, 2013. 1–19 p.
75. ANDRESS, B. "*Transforming curriculum in music*": National Association for the Education of Young Children. Washington, DC ,1995. 99–108 p.
76. ANDREWS, B. W. *Re-play: "Re-assessing the effectiveness of an arts partnership in teacher education"*. New-York: Springer, 2006. 443-459 p. ISBN 115-9-0069-003-2.
77. ATRASH-JUCAN A. "*Singing – therapeutical rehabilitation and socialisation factor for school children suffering from various disabilities*": Proceedings of International Musicological Congress. Timișoara, 2012. 283-293 p.
78. ATRASH-JUCAN, A.; VASILIU, L. "*Music therapy, a tool for the rehabilitation and education of disabled students. Methods and Techniques*": Latest Advances in

Acoustics&Music Proceedings of the 13th, WSEAS International Conference on Acoustics &Music, (AMTA 12), „G. Enescu”, University. Iași, 2012.

79. AUSTIN, J.R. “*Future classroom teachers' ability, self-perceptions, and attributional responses to failure in music: do music fundamentals classes make a difference?*”: Research Perspectives in Music Education. Colorado: University of Colorado, 1995, 6-15 p.
80. AVLAEV, O. U. The role of social intelligence in personal development. In: JournalNX. 2020, pp. 692–698.
Disponibil: <https://www.neliti.com/publications/342064/the-role-ofsocial-intelligence-in-personal-development>
81. BADARNE, BELAL; ERRLICH, AMIRA. “Dancing on the limits: An interreligious dialogue exploring the lived experience of two religiously observant music educators in Israel, In: Perspectives on Music, Education and Religion”. A Critical Inquiry (Eds Kallio, Alperson and Westerlund), Indiana USA, 2019, p. 262-272.
82. BADARNE, BELAL; COCIERU, NATALIA. “The correlation between music and elementary school disciplines (English, Mathematics and Religion). In: Acta et Commentationes”. Education Sciences. Science magazine. Chisinau: UST 2017, no. 2 (11), pp. 126-131.
83. BADARNE, BELAL. “Aspects of music integration in the didactic of other disciplines”. “În: Probleme actuale ale didacticii științelor reale. Conferința științifico-didactică națională cu participare internațională, ed.II, consacrată aniversării a 80-a a profesorului universitar Ilie Lupu, 11-12 mai 2018, Volumul II, UST, Chișinău, 2018, p. 103-110”.
https://ibn.idsi.md/sites/default/files/imag_file/Probleme%20actuale%20ale%20didacticii%20stiintelor%20reale%20-%20ed.2-a%20-%202018%20-%20USTir%20-%20V.%202-103-109.pdf
84. BADARNE, BELAL. “Between Tradition and Modernity: A Dialogical Survey of Arab and Jewish Musical Restrictions as Observed and Transformed by Religiously Observant Music Educators. In: the Critical Perspectives on Music, Education, and Religion that took place in Sibelius Academy, University of the Arts, Helsinki. August 20-22, 2014”.
<https://10times.com/critical-perspectives-on-music> (Fri, 22 Aug 1:30 PM - 3:00 PM)
85. BADARNE, BELAL. “Intercultural music teacher education in Israel: Reimagining religious segregation through culturally responsive teaching”. In: Visions for Intercultural Music Teacher Education (Eds Karlsen, Pratii and Westerlund), Springer International Publishing, 2020, p. 31-46
86. BADARNE, BELAL. “Teachers’ self-efficacy and attitudes towards integrating music in the didactic of other disciplines in elementary school. În: The 1st International Music

Education Conference of the Israel Philharmonic Orchestra. Music Education in the Community- Traditions, Challenges, and Innovations. May 14-17 2017, The Charles Bronfman Auditorium Tel Aviv, Israel”. <http://events.ortra.com/ipo2017/Program>
<https://program.eventact.com/Lecture/143861/2763809>

87. BADARNE, BELAL. “The Impact of music upon attention, attitude and motivation În: Artă și educație artistică,” Nr.1 (21), 2013 p. 58-60.
88. BADARNE, B., MUALEM, R., BISWAS, S., HNOUT, M., GANEM, S., ZBEDAT, Y., SHEHADEH, E., WAKSMAN, I., & MACHADO, C. “*Improvements in Cognition and Educational Attainment as a Result of Integrating Music into Science Teaching in Elementary School. Journal of Neuroscience and Neurological Surgery*, 8(3).” 2021. 1–8.
<https://doi.org/10.31579/2578-8868/161>
89. BĂJENESCU, T.-M. What is social intelligence? In: Journal of Social Sciences. 2022, nr. 5(3), pp. 39-47. ISSN 2587-3490. Disponibil: Doi:10.52326/jss.utm.2022.5(3).04
90. BARRETT, M. S., ZHUKOV, K., & WELCH, G. F. “Strengthening music provision in early childhood education: A collaborative self-development approach to music mentoring for generalist teachers”. *Music Education Research*, 21(5). 2019, 529–548.
<https://doi.org/10.1080/14613808.2019.1647154>
91. BAR-ILAN M.; SAPIR S. “The special committee on dropout: conclusions and recommendations”. Jerusalem, The Knesset Research and Information Center, 2002. 174 p. 67.
92. BARNETT, S. M. Society and intelligence. “In: The Cambridge Handbook of Intelligence. Second Edition. Cambridge University Press, 2020. pp. 964-988.
93. BARR, S. R. “*How elementary arts specialists collaborate with classroom teachers in interdisciplinary instruction to meet both national fine arts and academic standards:*” Unpublished doctoral dissertation. City of Fairfax:. George Mason University, 2006, ProQuest Dissertations and Theses, 242-242 p. Retrieved from <http://search.proquest.com/docview/304917110?accountid=13758>. (304917110)
94. BARRY, N. H.; SCHONS, S. “*Integrated curriculum and the music teacher: A case study*”. Contributions to Music Education. New-York, 2005. 57-72 p.
95. BATTERSBY, Sh.; CAVE, A. “*Preservice Classroom Teachers’ Preconceived Attitudes, Confidence, Beliefs, and Self-Efficacy Toward Integrating Music in the Elementary Curriculum*”: Applications of Research in Music Education. California, 2014. 52-59 p.
96. BEN - LION A.; ZIONIST Y. “Children in Israel on the verge of the next millennium”. Jerusalem: Brander Van Leer Foundation, 1999. 262 p. 68.

97. BEN SASSON-FURSTENBERG S. "Background document for the discussion of Compulsory Education Bill, presented to the Board of Education and Culture Jerusalem", 2001. 82 p.
98. BIASUTTI, M., ANTONINI PHILIPPE, R., & SCHIAVIO, A. "Assessing teachers' perspectives on giving music lessons remotely during the COVID-19 lockdown period". *Musicae Scientiae*, 26(3). 2022, 585–603. <https://doi.org/10.1177/1029864921996033>
99. BIASUTTI, M., CONCINA, E., DELOUGHRY, C., FRATE, S., KONKOL, G., MANGIACOTTI, A., ROTAR PANCE, B., & VIDULIN, S. "The effective music teacher: A model for predicting music teacher's self-efficacy. *Psychology of Music*," 49(6). 2021, 1498–1514. <https://doi.org/10.1177/0305735620959436> (Sage Journals)
100. BIASUTTI, M., FRATE, S., & CONCINA, E. Music teachers' professional development: Assessing a three-year collaborative online course. *Music Education Research*, 21(1). 2019, 116–133. <https://doi.org/10.1080/14613808.2018.1534818>
101. BIASUTTI, M., MERRICK, B., & JOSEPH, D. *Music teachers' perspectives on artificial intelligence tools: Opportunities and challenges. Music Education Research*. 2026. <https://doi.org/10.1080/14613808.2026.2672358> (doi.org)
102. BRESLER, L. "Music in a double bind: Instruction by non-specialists in elementary schools": Arts Education Policy Review. Champaign, Illinois, 1994. 30p.
103. BRESLER, L. "The subservient, co-equal, affective and social integration styles and their implications for the arts": Arts Education Policy Review. Champaign, Illinois, 1995. 31–38 p.
104. BRESLER, L. "Visual Art in Primary Grades": A Portrait and Analysis: Early Childhood Research Quarterly. Chicago, 1992. 397-414 p.
105. BROWN, M. I. et al. "The social shapes test: a new measure of social intelligence, mentalizing, and theory of mind". In: OSP. 2019, vol. 143, pp. 107-117. Disponibil: <https://www.sciencedirect.com/science/article/pii/S0191886919300479>
106. BROWN, P.; LEVINSON, S. C. Politeness: "Some Universals in Language Usage. Cambridge: Cambridge University Press", 1987. [cited on 15 December 2020] <https://psycnet.apa.org/record/1987-97641-000>
107. COCIERU N.; KAKOON K. Teachers communications availability as a key factor in enhancing learning motivation. In: "Conferința științifico-didactică națională cu participare internațională" "Probleme actuale ale didacticii științelor reale", ediția II-a, consacrată aniversării a 80-a a profesorului universitar Ilie Lupu, 11 – 12 mai 2018, UST, Chișinău, 2018, pp. 140 – 144.

108. COJOCARU-BOROZAN, M. "Natural laws of perpetuating the values of emotional culture in the family". In: Analele Universității „Constantin Brâncuși” din Târgu Jiu. Editura „Academica Brâncuși”. 2017, nr. 1, p. 7-17.
109. COLWELL, C. M. *“Integration of music and core academic objectives in the K-12 curriculum: Perceptions of music and classroom teachers”*: Applications of Research in Music Education. Kansas, 2008. 33–41 p.
110. DARAWSHE A. "Aspects of motivational modalities and structures". În: Acta et Commentationes, Științe ale educației, 2017, nr.2 (11), p.215-224.
111. DARAWSHE A. "The motivation to study in the elementary school".
<https://www.articles.co.il/article/>
112. DEVIS-ROZENTAL, C.; FARQUHARSON, L. "What influences students in their development of socio-emotional intelligence whilst at university? In: Higher Education Pedagogies". 2020, 5(1), pp. 294–309. Disponibil:
<https://doi.org/10.1080/23752696.2020.1820887>
113. DEWEY, J. *“Art as an Experience”*. NY: Minton, 1934. ISBN 978-0399531972.
114. EHRLICH A.; BADARNE B. *“Between Tradition and Modernity: A Dialogical Survey of Arab and Jewish Musical Restrictions as Observed and Transformed by Religiously Observant Music Educators”*: from a conference in Finland. Finland, 2014.
115. EISNER E. *“Cognition and Curriculum”*. New York: Longman, 1982. ISBN 978-0807733103.
116. FRANKOVSKÝ, M. "Social intelligence in the cultural context: Comparison of Indian and Slovak Managers". In: Organizational Psychology. 2019, vol. 9, nr. 3, pp. 8–19.
117. GAGIM, Ion. *“About auditive factor in music”*: Review of artistic education. Iași, 2012. 7-14 p.
118. GAGIM, Ion. *“Music and musicology in the context of modern epistemology”*: Artă și educație artistică: rev. de cultură, șt., și practică educațională. Bălți, 2009.45-49 p.
119. GAGIM, Ion. *“The dynamic musicology as a current trend in the theory of music”*: Review of artistic education. Iași, 2015. 7-17 p.
120. GILES, A. M.; FREGO, R. J. D. *“An inventory of music activities used by elementary classroom teachers”*: An exploratory study. Update: Applications of Research in Music Education. North Dakota, 2004. 13–22 p.
121. GILL, A., OSBORNE, M. S., & MCPHERSON, G. E. *“Building confidence in music performance: A teacher-led self-efficacy approach. Music Education Research”*. 2026.
(tandfonline.com)

122. GREENFIELD, P. M. Historical Evolution of Intelligence. In: "The Cambridge Handbook of Intelligence". Second Edition. Cambridge University Press, 2020. pp. 916-940.
123. HALLAM, S. "Music Education. In *The Encyclopedia of Child and Adolescent Development*". Wiley. 2020. <https://doi.org/10.1002/9781119171492.wecad266>
124. HALLAM, S. "The Impact of Music on Human Development and Well-Being. In *Education Sciences*". 2022.
125. HARNEY, K. "Integrating Music Across the Elementary Curriculum". New York, NY: Oxford University Press. 2020. <https://doi.org/10.1093/oso/9780190085582.001.0001>
126. HASH, P. M. "Disseminating Research". In R. Miksza, J. Hodges, P. Hash, C. Shaw & L. Richerme (Eds.), "Music Education Research": An Introduction. Oxford University Press. 2021.
127. HASH, P. M. "Historical Research". In R. Miksza, J. Hodges, P. Hash, C. Shaw & L. Richerme (Eds.), "Music Education Research": An Introduction. Oxford University Press. 2021.
128. HASH, P. M. Remote Learning in School Bands During the COVID-19 Shutdown. "Journal of Research in Music Education", 68(4). 2021. 381–397. <https://doi.org/10.1177/0022429420967008>
129. HASH, P. M. "Pre-service classroom teachers' attitudes toward music in the elementary curriculum": Journal of Music Teacher Education. California, 2010. 6–24 p.
130. HENNESSY, S. "Overcoming the red-feeling: The development of confidence to teach music in primary school amongst student teachers": British Journal of Music Education. London, 2000. 183–196 p.
131. HERRERA TORRES, L.; BUITRAGO BONILLA, R. E.; ÁVILA MORENO, A. K. "Empatía en futuros docentes de la Universidad Pedagógica y Tecnológica de Colombia". En: Journal of New Approaches in Educational Research. 2016, 6 (1), pp. 30–37. Disponibil: <https://doi.org/10.7821/naer.2016.1.136>
132. HILL-CLARKE, K. Y.; ROBINSON, N. R. "Locomotion and literacy: Effective strategies to enhance literacy instruction": Annual Meeting of the National Council of Teachers of English. Atlanta, 2003. https://files.eric.ed.gov/fulltext/ED474066.pdf?utm_source
133. HILTON, C.; SAUNDERS, J. "Supporting generalist elementary school teachers to integrate mathematics and music": 43rd Annual Meeting of the International Group for the Psychology of Mathematics Education VOLUME 4. London, 2019.
134. JABER, L. Z.; SOUTHERLAND, S.; DAKE, F. "Cultivating epistemic empathy in preservice teacher education". In: Teaching and Teacher Education. 2018, nr. 72, pp. 13–23. Disponibil: <https://doi.org/10.1016/j.tate.2018.02.009>

135. JACKSON, M. F.; JOYCE, D. M. *"The Role of Music in Classroom Management"*. New York: New York University, 2003. 1-11 p. ISBN 978-1416611882.
136. JONES, S. M.; PEARSON D. *"Music Highly Engaged Students Connect Music to Math:"* General Music Today. Thousands Oaks, CA, 2013. 18–23 p.
137. KANE, J. *"New ways of "training" in primary school music education: Results and implications of a longitudinal research study"*: Paper presented at the proceeding of the 2005 National Conference of the Australian Association for Research in Education, Parramatta. New South Wales, Australia, 2005.
138. KHAN A. et al. "Communication Skills of a Teacher and Its Role in the Development of the Students' Academic Success In: *Journal of Education and Practice*," Vol.8, No.1, 2017, pp. 18-21 ISSN 2222-288X (Online)
139. KIHLSSTROM, J. F.; CANTOR, N. Social Intelligence. In: Sternberg R. J. (ed.) *"The Cambridge Handbook of Intelligence. Second Edition. Cambridge University Press"*, 2020. pp. 256-280.
140. KRASHEN, S. D. *"Principles and practices in second language acquisition. Oxford, England: Pergamon Press"*, 1982.
141. KRETCHMER, D. L. *"Developing pre-service teacher self-efficacy to integrate music in elementary classrooms: An investigation in growth through participation, observation and reflection (Doctoral dissertation, University of Colorado)"*. Colorado, CA, 2002.
142. *"Leaving no one behind: How far on the way to universal primary and secondary education?"*
POLITICA 27 / FACT SHEET 37. UNESCO, 2016, 16 p. Print
143. LU, Y., VILADOT, L., CHEN, X., FAN, Y., & YUAN, J. "The role of embodied musical engagement in enhancing non-cognitive skills and rehabilitation outcomes in children with special needs. *Frontiers in Psychology*", 17. 2026.
<https://doi.org/10.3389/fpsyg.2026.1798176>
144. MANACH, M. *"Etude de la construction de competences sociales par une analyse del'activité en situation deformation: transformation du rapport à soi et aux autres"*. Education. Brest: Université de Bretagne Occidentale, 2019.
145. McPHERSON, G. E.; McCORMICK, J. *Self-efficacy and music performance: Psychology of Music*. Melbourne, 2006. 325–339 p.
146. MERELL, A. *The benefit of incorporating music in the classroom*. Texas, 2004.
147. MUALEM, R.; BADARNE, BELAL.; BISWAS, S.; HNOUT, M.; GANEM, S. "Improvements in Cognition and Educational Attainment as a Result of Integrating Music into Science Teaching in Elementary School". *J. Neuroscience and Neurological Surgery*,

2021, 8(3), pp.1-8. https://www.auctoresonline.org/images/currentissue/1623142729JNNS-CR-161-Galley_Proof.pdf

148. NUGROHO, D. M., & BIASUTTI, M. *Preservice Music Teachers' Experiences in an Online Teaching Internship: A Qualitative Case Study*. *International Journal of Music Education*. 2026. <https://doi.org/10.1177/02557614261447918> (Sage Journals)
149. NUGROHO, D. M., & BIASUTTI, M. Preservice Music Teachers' Experiences in an Online Teaching Internship: A Qualitative Case Study. "*International Journal of Music Education*". 2026. <https://doi.org/10.1177/02557614261447918>
150. ORECK, B. "*The artistic and professional development of teachers:*" *Journal of Teacher Education*. Michigan. 2004. 55–69 p.
151. OTTERBECK, J. "*Music as a Useless Activity: Conservative Interpretations of Music in Islam, Shoot the Singer!*": *Music Censorship Today*, Marie Korpe. London: Zed Books, 2004.
152. OTTERBECK, J. "*The legal Status of |Islamic Minorities in Sweden*": R. Aluffi B. Zincon -*The legal treatment of Islamic Minorities in Europe*. Leuven: Peeters, 2004.
153. PAQUETTE, K. R.; RIEG, S. A. "*Using music to support the literacy development of young English language learners*": *Early Childhood Education*. New-York, 2008. 227-232 p.
154. PATEL, A. D. "*Language, music and the brain: A resource-sharing framework*": P. Rebuschat, *Language and music as cognitive systems*. Oxford: Oxford University Press, 2003.
155. PATEL, A. D. "*Music, language and the brain.*" New York: Oxford University Press, 2008. ISBN 978-0195123753.
156. PERKINS, D. "*A well-tempered mind.*" New York, NY: Dana Press, 2004. ISBN 978-1932594089
157. PROPST, T. G. "*The relationship between the undergraduate music methods class curriculum and the use of music in the classroom of in-service elementary teachers*": *Journal of Research in Music Education*. Maryland, CA, 2003. 316–329 p.
158. RAUSCHER, Francis H. "*Can Music Instruction Affect Children's Cognitive Development?*" *ERIC Digest*, 2003.
159. RICHARD, Amato; PATRICIA A. "*Making it Happen: From Interactive to Participatory Language Teaching.*" New York: Longman, 2003. ISBN 978-0132361378.
160. ROUTIER, Wanda J. "*Read Me a Song: Teaching Reading Using Picture Book Songs:*" Orlando: International Reading Association. Orlando, 2003.

161. SCHERBAKOV, S. V. "Students social intelligence and the choice of behavioral strategies in conflict resolution". In: Clin Schizophr Relat Psychoses Volume 15: 3, 2021 Doi: 10.3371/CSRP.SS.081021
162. SCHLAUG, G.; NORTON, A.; OVERY, K.; WINNER, E. "*Effects of music training on the child's brain and cognitive development: Annals of the New York Academy of Sciences. New York,*" 2005. 219–230 p.
163. SEDDON, F.; BIASUTTI, M. "*Non-specialist trainee primary school teachers' confidence in teaching music in the classroom:*" Music Education Research. Padova, 2008. 403–421 p.
164. SHAROV, S. "The significance of social competence for future teachers in the information society. In: Science, Research, Development". 2019, nr. 19, pp. 49-52. Disponibil: http://eprints.mdpu.org.ua/id/eprint/7518/1/sharov_2019_49.pdf
165. SIEBENALER, D. "*Training teachers with little or no music background: Too little, too late?*": Applications of Research in Music Education. Durham, 2006. 14–22 p.
166. SMITHRIM, K.; UPITIS, R. "*Learning through the arts: Lessons of engagement*": Canadian Journal of Education. Toronto, 2005. 109-127 p.
167. SPEER, A. B.; CHRISTIANSEN, N. D.; LAGINESS, A.J. "Social intelligence and interview accuracy: individual difference in the ability to construct interviews and rate accurately". In: International Journal of Selection Assessment. 2019, 27(2), pp. 104–128. Disponibil: <https://doi.org/10.1111/ijsa.12237>
168. STEIN, M. R. "*Music courses for preservice elementary classroom teachers: Factors that affect attitude change toward the value of elementary general music*": Doctoral dissertation, University of Northern Colorado. Colorado, CA, 2002.
169. STERNBERG, R. J. "The concept of intelligence. In: The Cambridge Handbook of Intelligence". Second Edition. Cambridge University Press, 2020. pp. 3-18.
170. STILL, K.; BOBIS J. "*The Integration of Mathematics and Music in the Primary School Classroom:*" Proceedings of the Annual Conference of the Mathematics Education Research Group of Australasia. Sydney, 2005.
171. SWAINSTON, J. "Cultivating social intelligence: 3 ways to understand others, 2022". (online) Disponibil: <https://positivepsychology.com/social-intelligence/>
172. VANATTA-HALL, J. E "*Music education in early childhood teacher education: The impact of a music methods course on preservice teachers' perceived confidence and competence to teach music*": Doctoral dissertation, University of Illinois at Urbana-Champaign. Champaign, IL, 2010.

173. VILADOT, L.; M. CSLOVJECSEK. "Do you Speak ... Music?' Facing the Challenges of Training Teachers on Integration": Hellenic Journal of Music, Education, and Culture. Athens, 2014. 1–14 p.
174. VILADOT, L.; HILTON, C.; CASALS, A.; SAUNDERS, J. "The integration of music and mathematics education in Catalonia and England: perspectives on theory and practice": Music Education Research. London, 2018. 71-82 p.
175. VILADOT, L., & CASALS, A. Articol publicat în "Revista Electrónica Complutense de Investigación en Educación Musical (RECIEM)", 23(1). 2026, 57–69". (portalrecerca.uab.cat)
176. VILADOT, L., ESCODA, J., & REY-GAREGNANI, M. "Who Helps Who? A Mutual Support Programme for Secondary Novice Music Teachers. În L. O'Connell, M. Lennon, H. Lawlor, & M. Gall (Eds.), *Traditions in Transformation.*" Vol. 14, 2026. pp. 135–152). Helbling Verlag. (portalrecerca.uab.cat)
177. WELLER, M. W. "Marketing the curriculum: Core versus non-core subjects in one junior high school (Doctoral dissertation, University of Wisconsin-Madison)". Dissertation Abstracts International, 1991, nr. 52(4), pp. 1203-A.

In French:

178. GAGIM, I. "La Musique: La Loi de la boucle divine": An International Review of the Humanities and Social Sciences. Volume 9. Agathos, 2018. 115 – 127 p.
179. GAGIM, I. *Le vécu spirituel de la musique comme expérience métaphysique (the spiritual lived music as metaphysical experience)*: An International Review of the Humanities and Social Sciences, vo. 3. Agathos, 2012. 89-107 p.

In Hebraic:

180. ירושלים: משרד , (1) ענבר, ע' תכנית גרעין בחינוך מוזיקלי – הזמנה לדיון, מפתח – כתב עת למורי המוזיקה . ז."החינוך, האגף לתכניות לימודים, התשנ

http://www.education.gov.il/tochniyot_limudim/mafteach/edna.htm

In Russian:

181. ВАЛИУЛЛИНА, Е. В. "Эмпатия как компонент эмоционального интеллекта в аспекте асертивности личности"/ Е. В. Валиулина // Вестник ШГПУ. - 2021. -№ 3 (51). - С. 95- 98.

APPENDIXES

Appendix 1. Attitudes towards music integration questionnaire

Please fill out the extent to which each statement is true for you according to the experience you had in applying music integration in your lessons and according to what you see during the lessons following statements on a scale from 1 to 5, so that 1 is not true, and 5 is very true:- Integrating music in teaching

	1	2	3	4	5
1. Contributes to understanding the learnt subject					
2. Contributes to enjoyment of learning					
3. Improves the student's fine motoric skills					
4. Cultivating expression ability					
5. Contributes to positive relationships among students					
6. Improves the performance of learning tasks					
7. Suitable for a variety of learning styles of students					
8. Helps students to internalize the material					
9. Enhances creativity among students					
10. Clarifies better the learnt subjects					
11. Helps pupils in memorizing words					
12. Develops the crude motoric skills of the student					
13. Improves concentration of students					
14. Does not improve the focus of the students in the learnt material					
15. Raises student achievements					
16. Encouraged by the manager					
17. Helps students with learning difficulties absorb the material					
18. Useful for marketing the school					
19. Disturbing in class management					
20. Increases the motivation for learning among students					
21. Dispels boredom among students					
22. Contributes to enjoyment of learning					
23. Encourages students to be active					
24. Makes noise in the classroom					
25. Encourages the student into a class activity					
26. Helps students understand the learning content from a different perspective					
27. Effects students' behavior in class					
28. Creates a positive social atmosphere					
29. Improves classroom management					
30. Improves the achievements of students					
31. Contributes to cohesion among students					
32. Creates a pressure atmosphere in the classroom					
33. Arouses opposition among parents					

34. Lowers tension among pupils					
35. Strengthens the student's self-confidence					
36. Lowers anxiety and stress among students					
37. The use of musical instruments in lessons develops the student's sense of ability					
38. Arousing enthusiasm among parents					
39. Increases the number of students who pass the exams					
40. Improves the relationship between the teacher and his students					
41. Is not encouraged by the manager					
42. I like to integrate music in class					
43. I am against combining music for religious reasons					
44. Improves coordination in the student					
45. Contributes to discipline in the classroom					

Appendix 2. The questionnaire regarding the efficiency of music integration

Please fill out the extent to which each statement is true for you following statements on a scale from 1-5 so that's not true, and 5 is very true:

	1	2	3	4	5
1. I play music as a background in the lesson					
2. I play background music during an activity or work on a project in class					
3. I use teaching methods that combine music and movement					
4. I use teaching methods that combine music and painting					
5. I play music related to the subject studied in class					
6. I play background music to increase students' concentration while learning vocabulary and / or memorizing facts.					
7. I cannot integrate music in classes					
8. I connect the study of elements and musical content with the subject studied in my lessons					
9. I play music at the beginning or at the end of the lesson to create a good atmosphere in class					
10. It's hard for me to find music suitable for studied subjects					
11. I use songs and recitations in a lesson to improve the memory of facts and content by rhyming, rhythm, and melody					
12. In my opinion, cannot integrate music in the subjects I teach					

13. In my class, students hear about 5 minutes of classical music at the beginning of the class to relax and enter to a learning situation comfortably					
14. In the lesson I ask students to express themselves through music (to create clips, to compose melody or songs, etc.)					
15. I have difficulty integrating music in my lessons					
16. I play and integrate music related to the material studied during the active break					
17. I publish musical pieces of the students on the school website					
18. I invite teachers with musical talent to perform in front of the students - to sing or play music related to the material I taught					
19. I feel capable to integrate music in teaching					
20. I invite parents with musical talent to appear in front of the students - to sing or play music related to the material I taught					
21. I am collaborating with the music teacher at the school to integrate music into my teaching					
22. At my lessons, students create music					
23. I integrate music and other arts in my lessons					
24. I feel I'm not ready enough to integrate music in teaching in my lessons					
25. pupils use musical instruments in my lessons					
26. Here all teachers are exposed to music integration					
27. In my lessons, students perform songs					
28. There is no connection between musical content and my teaching profession at this school,					
29. Students play music in my lessons					
30. I ask the students to compose songs for the subjects studied					
31. I am not able to integrate music in my lessons					

Personal details - A questionnaire:

Specify or Mark a circle on the answer you choose:

Age: _____

Gender: M / F

Marital Status: Single / Married / Divorced

No. of Children: _____

Academic degrees: _____ qualified teacher / BA / MA / PhD

Role in school: _____

Teaching field: Science / Arts / Math / Literature Language / Foreign Language / Geography
/ religion / sport /

Other (Specify / s): _____

Years of experience as a teacher (seniority): _____

Music education:

____ I have no musical education

____ musical learning

____ sound development

____ Music class at high school

Other (Specify / s) _____

What is the frequency of hearing music?

1. Once a week

2. Three times a week

3. Every day.

Do you sing in a choir? _____

Do you play in a band? _____

What music style do you listen to? _____

Do you like to sing? _____

Do you play a musical instrument? _____

Thank you for participating in the study

Appendix 3. Questions in the semi-structured interview

Semi-Structured Interview

Tell me please how do you use music in you teaching - give 1-2 examples

Tell me please about situations that it was difficult for you to integrate music in teaching- give 1-2 examples

What helped you to integrate music in your teaching and overcome difficulties

Appendix 4

Averages of efficiency before:

Descriptive Statistics					
Std. Deviation	Mean	Maximum	Minimum	N	
.8815	1.788	5.0	1.0	80	ab1
1.0076	2.150	5.0	1.0	80	ab2
.6157	1.475	3.0	1.0	80	ab3
.8264	1.775	4.0	1.0	80	ab4
.8019	1.800	4.0	1.0	80	ab5
.8282	1.813	4.0	1.0	80	ab6
.8779	2.038	5.0	1.0	80	ab7
.8228	1.863	4.0	1.0	80	ab8
.9277	1.888	5.0	1.0	80	ab9
.8104	1.663	4.0	1.0	80	ab10
.7496	1.713	4.0	1.0	80	ab11
.6359	1.475	3.0	1.0	80	ab12
.8385	1.825	4.0	1.0	80	ab13
.8786	2.013	4.0	1.0	80	ab14
.6621	1.450	3.0	1.0	80	ab15
.8268	2.000	5.0	1.0	80	ab16
1.0671	1.975	5.0	1.0	80	ab17
.8233	2.075	4.0	1.0	80	ab18
1.0110	2.125	5.0	1.0	80	ab19
.9291	1.850	5.0	1.0	80	ab20
1.0243	2.163	5.0	1.0	80	ab21
1.1632	2.163	5.0	1.0	80	ab22
.8205	1.688	4.0	1.0	80	ab23
.7704	2.163	4.0	1.0	80	ab24

.7531	1.700	4.0	1.0	80	ab25
.8583	2.150	4.0	1.0	80	ab26
.7076	1.675	4.0	1.0	80	ab27
.8873	1.850	5.0	1.0	80	ab28
.7547	1.750	4.0	1.0	80	ab29
.6363	1.513	3.0	1.0	80	ab30
.7504	1.638	4.0	1.0	80	ab31
.9467	2.200	5.0	1.0	80	ab32
1.1418	2.750	5.0	1.0	80	ab33
.9427	1.850	4.0	1.0	80	ab34
.7546	1.613	4.0	1.0	80	ab35
.9993	1.838	5.0	1.0	80	ab36
.7025	1.613	4.0	1.0	80	ab37
.9671	2.463	5.0	1.0	80	ab38
.6580	1.650	3.0	1.0	80	ab39
.9098	1.788	4.0	1.0	80	ab40
1.0421	2.450	5.0	1.0	80	ab41
1.1528	2.013	5.0	1.0	80	ab42
1.6695	3.188	5.0	1.0	80	ab43
.5597	1.375	3.0	1.0	80	ab44
.7334	1.638	4.0	1.0	80	ab45
				80	Valid N (listwise)

Averages of efficiency before:

Descriptive Statistics					
Std. Deviation	Mean	Maximum	Minimum	N	
.5215	1.263	3.0	1.0	80	eb1
.3180	1.113	2.0	1.0	80	eb2
.3712	1.163	2.0	1.0	80	eb3
.2436	1.063	2.0	1.0	80	eb4
.4838	1.238	3.0	1.0	80	eb5
.2651	1.075	2.0	1.0	80	eb6
.9678	2.000	5.0	1.0	80	eb7
.2843	1.088	2.0	1.0	80	eb8
.8264	1.475	5.0	1.0	80	eb9
.8997	2.025	4.0	1.0	80	eb10
.9084	1.688	4.0	1.0	80	eb11
.9820	1.813	4.0	1.0	80	eb12
.1118	1.013	2.0	1.0	80	eb13
.4437	1.175	3.0	1.0	80	eb14
.8329	1.800	5.0	1.0	80	eb15
.2487	1.038	3.0	1.0	80	eb16
.2236	1.025	3.0	1.0	80	eb17
.2487	1.038	3.0	1.0	80	eb18
.7892	1.600	4.0	1.0	80	eb19
.1118	1.013	2.0	1.0	80	eb20
.3689	1.125	3.0	1.0	80	eb21
.1118	1.013	2.0	1.0	80	eb22
.1118	1.013	2.0	1.0	80	eb23
.9274	1.775	5.0	1.0	80	eb24

.1118	1.013	2.0	1.0	80	eb25
.1118	1.013	2.0	1.0	80	eb26
.7621	1.538	4.0	1.0	80	eb27
1.1904	2.275	5.0	1.0	80	eb28
.1571	1.025	2.0	1.0	80	eb29
.7252	1.325	4.0	1.0	80	eb30
1.4318	2.775	5.0	1.0	80	eb31
				80	Valid N (listwise)

AUTHOR'S STATEMENT

I, the undersigned, declare on my own responsibility that the materials presented in the doctoral thesis ***The model of integrating musical activities into the educational process in primary education*** are the result of my own research and scientific achievements. I confirm this fact; otherwise, I will bear the consequences in accordance with the law in force.

Badarne Belal

Signature

Date:

CURRICULUM VITAE

Personal information

First name: Belal

Surname: Badarne

Country: Israel

Date of birth: 30.11.1973

Education

2015-2021 - doctoral studies, TSU, Republic of Moldova

1998-2001 - Master's Degree in Music Education, Levinsky Academy, Tel-Aviv, Israel;

1994-1997 - Bachelor's Degree in Music Education, Haifa Pedagogical College, Israel;

Fields of scientific interest: Music education, Music integration in teaching, primary level education, didactics Music Education, implementation of modern didactic technologies in the education process, continuous professional training of specialists in primary education.

Current employment status: Primary Teacher, Lecturer in College.

Work experience:

1997 - present - Music Teacher in Al-Batof High School, Arraba, Israel,

2016 - present - Lecturer in K college, and in Sakhnin college;

2015 - present – Supervisor of the arts in Education, Ministry of education, Israel;

Published scientific and methodological works:

1. Badarne B. "The Impact of music upon attention, attitude and motivation" În: Artă și educație artistică, Nr.1 (21), 2013 p. 58-60.

https://ibn.idsi.md/sites/default/files/imag_file/The%20impact%20of%20music%20upon%20attention%20attitude.pdf

2. Badarne Belal, Cocieru Natalia. "The correlation between music and elementary school disciplines (English, Mathematics and Religion)". In: Acta et Commentationes. Education Sciences. Science magazine. Chisinau: UST 2017, no. 2 (11), pp. 126-131.

https://ibn.idsi.md/sites/default/files/imag_file/The%20correlation%20between%20music%20and%20elementary%20school%20disciplines%20%28English%2C%20mathematics%20and%20religion%29.pdf

3. Mualem, R., Badarne, B., Biswas, S., Hnout, M., & Ganem, S. "Improvements in Cognition and Educational Attainment as a Result of Integrating Music into Science Teaching in Elementary School". *J. Neuroscience and Neurological Surgery*, 2021, 8(3), pp.1-8.
https://www.auctoresonline.org/images/currentissue/1623142729JNNS-CR-161-Galley_Proof.pdf

2. Articole în reviste din străinătate recunoscute

4. Badarne Badarne and Amira Errlich. "Dancing on the limits: An interreligious dialogue exploring the lived experience of two religiously observant music educators in Israel, In: Perspectives on Music, Education and Religion". A Critical Inquiry (Eds Kallio, Alperson and Westerlund), Indiana USA, 2019, p. 262-272.

<https://library.oapen.org/bitstream/handle/20.500.12657/23105/1007053.pdf?sequence=1#page=40>

5. Badarne B. "Intercultural music teacher education in Israel: Reimagining religious segregation through culturally responsive teaching". In: Visions for Intercultural Music Teacher Education (Eds Karlsen, Pratii and Westerlund), Springer International Publishing, 2020, p. 31-46

<https://library.oapen.org/bitstream/handle/20.500.12657/23105/1007053.pdf?sequence=1#page=40>

3. Materiale la conferințe internaționale peste hotare

6. Badarne B. "Teachers' self-efficacy and attitudes towards integrating music in the didactic of other disciplines in elementary school. În: The 1st International Music Education Conference of the Israel Philharmonic Orchestra. Music Education in the Community- Traditions, Challenges, and Innovations". May 14-17 2017, The Charles Bronfman Auditorium Tel Aviv, Israel.

<http://events.ortra.com/ipo2017/Program>

<https://program.eventact.com/Lecture/143861/2763809>

7. Badarne B. Between "Tradition and Modernity: A Dialogical Survey of Arab and Jewish Musical Restrictions as Observed and Transformed by Religiously Observant Music Educators. In: the Critical Perspectives on Music, Education, and Religion that took place in Sibelius Academy, University of the Arts, Helsinki". August 20-22, 2014.

[https://10times.com/critical-perspectives-on-music\(Fri, 22 Aug 1:30 PM - 3:00 PM\)](https://10times.com/critical-perspectives-on-music(Fri, 22 Aug 1:30 PM - 3:00 PM))

<https://publish.iupress.indiana.edu/read/music-education-and-religion/section/638611b3-69b4-453c-8be2-c82cfe020097>

4. Materiale la conferințe cu participare internațională

8. Badarne B. "Aspects of music integration in the didactic of other disciplines. În: Probleme actuale ale didacticii științelor reale. Conferința științifico-didactică națională cu participare internațională, ed.II, consacrată aniversării a 80-a a profesorului universitar Ilie Lupu", 11-12 mai 2018, Volumul II, UST, Chișinău, 2018, p. 103-110.

https://ibn.idsi.md/sites/default/files/imag_file/Probleme%20actuale%20ale%20didacticii%20stiintelor%20reale%20-%20ed.2-a%20-%202018%20-%20USTir%20-%20V.%202-103-109.pdf

Languages: Hebrew, Arabic and English

Contact details: Address: Elgharbia str., Arraba, Postal code: 30812, ISRAEL

Phone: +972 – 4812136, *Mobile:* +972 - 53 - 4666167

E-mail: belalmusica@gmail.com