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MUSIC INTEGRATION IN THE TEACHING OF OTHER DISCIPLINES IN PRIMARY EDUCATION

531.01. GENERAL THEORY OF EDUCATION

ABSTRACT
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INTRODUCTION

The relation of music and learning is known in literature as very beneficial and recommended. Courses in integrating music methods are considered useful and necessary for all teachers.

However, not all teachers recognize the importance or value of a methods class because of their less than favorable experiences in their elementary music classes and low efficacy to integrate music effectively.

Helping elementary teachers to see the value of integrating music in their curriculum—and that they are more than capable of doing so if they focus on their attributes and maintain positive attitudes with regard to integrating music in teaching—may contribute to their success in the actual integrating music in their teaching.

This study focuses on elementary school teacher's attitudes and efficacy with regard to integrating music in teaching, and suggests an integrating music program (MIM). In the present research, there is an experimental group and a control group. Teachers in the experimental group are exposed to "MIM" and their attitude and efficacy are examined before and after applying the program.

This research exposes conclusions regarding integration of music in teaching and suggest recommendations and a model of integrating music program.

In the present research, there is an experimental group and a control group. The teachers in the experimental group were exposed to "MIM", so their attitude and the effectiveness were examined before and after the application of the program.

This research exposes conclusions regarding integration of music in teaching and suggests recommendations and a model of integrating music.

CONCEPTUAL HIGHLIGHTS OF THE RESEARCH

Theme relevance: 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 [22]. 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 [38].

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]; the triadic concept in philosophy (syncretism-analysis-

synthesis) [Hegel]; delimitation of scientific knowledge from artistic knowledge [N. Bagdasar; C.Bârzea]; the concept of musicosophy [G.Bălan, I.Gagim];

- *in general psychology and music psychology*: the theory of musical skills [B.Teplov, G.Ţîpin]; psychoenergetic theory of music [E.Kurth]; the theory of the dynamic nature of harmony [Iu.Tiulin]; the biphasic theory in the knowledge of music "perception and perception" of the sound message [G. Orlov, I. Gagim]; the proto-psychological concept of music, musical knowledge [I.Gagim]; extensive knowledge of music [G.Bălan], the triadic system in the general development of psychic functions: I-M-T [B.Asafiev];

- *in musicology*: the algorithmic theory sound-consciousness [E.Ansermet]; functional theory of music [D.Kuklin]; intonational theory of music [B. Asafiev, 144]; the concept of the message in music (dynamic, structured based on a hierarchy) [M. Bonfelid, I. Gagim];

- *in general pedagogy* and arts pedagogy: the concept of operative cognitivism [M.Minder]; the concept of music education [I.Gagim, 34-49].

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 [20; 21; 22; 23] and Leonhard [76], 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 [26].

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 [76]. 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 [30; 20]. Methods of integrating music are one of the main methods of integrating the arts used in teaching in elementary school classes [20]. Its importance is mentioned by Bresler [23], Merrell [83] and Krashen [71], 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 [37].

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.

Based on these ideas, there is a growing need to implement those teaching strategies that fit with the methods of integrating arts and music and contribute to the development of the ability to teach through music. Advocates from artistic associations have evolved into curricular projects and materials. For example, teaching and learning basic subjects through art have been promoted by projects such as RITA (Reading Improvement through the Arts) or ABC (Arts in the Basic Curriculum) [20].

Description of the research situation: Methods of integrating music are one of the main methods of integrating the arts, used in the teaching process in elementary school classes [20]. Its importance is mentioned by Bresler [23], Merrell [83] and Krashen [71], 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 [I. and M. Abdulescu; T. Carlateanu, V.Goraş-Postică; M.Călin; I. Cerghit, I. Radu, E. Popescu, M. Cojocaru, L. Papuc, L. Sadovei, E. Joita, M. Ionescu, M. Bocoş, P. Mureşan; C.-L.Oprea, V.Pălărie; Ş.Popenici; D.Potolea; I.Radu, V.Vasile, I.Gagim], addressing all their aspects: projective (designed curriculum) and procedural (taught curriculum, teaching-learning / study-evaluation methodologies), subjective (action of teaching-learning subjects) and objective (characteristics of the subjects taught), of the educational finalities (competences-traits-behaviors-aptitudes), advancing similar concepts [37].

This study analyzes the attitudes of elementary school teachers and the effectiveness of music integration in teaching in primary school in general.

Students from several colleges and pedagogical universities with a profile in primary education are required to take a course on the integration of musical methods in order to obtain a degree in their field [17; 20; 94]. These courses are offered to prepare future teachers for a holistic approach to teaching and learning in the classroom, as well as to generate positive attitudes about the role of music in the lives of their students [17; 101]. However, the importance of methods of integrating music is not always recognized by teachers whose attitudes, and sense of ability are low. This affects their performance as teachers [117].

The relationship between teaching methods and other elements of education, says I. Gagim, allows the teacher creative adaptations to educational objectives and content, school assessment, through the interdependence of communication-knowledge-pedagogical creativity at the level of any instructive-educational activity. This ensures the informative-formative unity of the didactic activity, regulates the objective-contents-methodologies ratio [47].

Thus, it is very important for music methodology instructors to know that an introductory course in music is necessary for elementary school graduates to help them understand how to confidently and successfully integrate music into their curriculum when they become teachers [17].

Degree of investigation of the problem and research premises:

The integration of music in teaching has been studied in several studies, including:

- Bresler [20; 21], studied the field of music integration in teaching.

- Hallam and Price [58] and Isaacson [64] and Jackson [65] and Merrell [83] conducted studies on the effects of integrating music into teaching on children.

- Battersby and Cave [17], Hash [59] and Kretchmer [72] conducted studies on pre-service classroom teachers' preconceived attitudes, confidence, beliefs, sense of ability and the effectiveness of integrating music into the elementary core curriculum. In one of their studies, Battersby and Cave [17] point out that one of the biggest obstacles to the integration of music in teaching is that the teacher does not have a positive attitude towards the integration of music and has a low sense of ability in regarding musical cooperation.

The methodological component of Music Education is capitalized and developed by several authors from the Republic of Moldova, such as A. Popov, 1999, T. Bulga, 1999, M. Vacarciuc, 2002, I. Gagim, 2004 [34-49], M. Morari, 2005, Vl.Babii, 2006, L.Graneţkaia, 2008, their research object being focused on the action dimension of music education, realized through methods and procedures / techniques of teaching-knowledge training and capacity building and attitudes, thus capitalizing on various aspects of the specific character of music.

In his studies, the scientist I. Gagim:

a) draws their own similar ways of curricular contents mastering musical knowledge, students discover the laws of sounds: the four features (duration, pitch, intensity, timbre) form the musical language; rhythm, measure, melody, harmony, dynamics, sound coloristics give rise to the sound image [34, pp. 138-139];

b) proposes three phases of formation of musical skills: I. feeling-living; II. practical application in different forms (execution, audition, creation, artistic characterization); III. "theoretical" awareness [34, p. 77];

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

d) delimits two levels of music education: theoretical-musicological and theoretical-technological, the very action of skills training, following the path of notification-experience-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 teaching field, the attitudes and sense of ability of the teacher in Israel remains an aspect still little explored. In these conditions, it is very necessary to develop a technological model for implementing this method, which will assign the process of teaching the five main teaching disciplines to the Ministry of Education and will promote and stimulate inter-understanding.

Documentation of the scientific literature on the use of music integration in teaching has revealed several contradictions between teachers' attitudes and sense of ability towards music integration; their beliefs about music in general: the effectiveness of music integration; the pedagogical knowledge acquired by teachers during academic studies and their needs in the field.

Many countries deal with these contradictions using special introductory programs in which they all focus on content. However, the contradictions listed above open up a new opportunity while considering music integration and do not focus on the content of music integration methods, but on the attitudes and sense of ability of teachers that make a difference when teachers want to use music integration methods.

The above leads to **the problem of research** that finds the lack of a model for organizing the educational process, which would achieve the effectiveness of music integration and effect the attitudes and sense of ability of teachers towards the integration of music in teaching. At the level of conceptualizing and implementing the integration of music in the teaching field, the attitudes and sense of ability of the teacher in music integration in Israel remain an aspect still little explored. In these conditions, it is very necessary to develop a technological model for the implementation of this method, which through the Ministry of Education will be implemented in the teaching process of the five main teaching disciplines and will promote and stimulate inter-understanding. Therefore, we can formulate the main problem of the research: What would be the technological model of applying the integration of music in the teaching process, this having an effect on

teachers' attitudes and sense of ability and the effectiveness of music integration in the teaching process?

The aim of the research is to establish the psycho-pedagogical premises of music integration in various disciplines and to develop the pedagogical model for integrating music in elementary schools by increasing teachers' sense of ability and changing their attitudes towards integrating music into teaching and raise the effectiveness of music integration in teaching.

The scientific novelty and originality of the research is based on the theoretical and practical foundation of the integration of music in teaching, by demonstrating the positive correlation between teachers' attitudes and the effectiveness of applying music integration in teaching, by establishing the characteristics of the music integration program which changes teachers' attitudes and the effectiveness of music integration, by developing the MIM music integration model which correlates the factors, conditions and methods for the development of teachers who implement methods of music integration in teaching other disciplines.

Substantiation of the theoretical and applied functionality of the MIM model for the development of teachers who use methods of music integration in teaching by applying a model of music integration (MIM) that has increased the effectiveness and changed their attitudes, aims to improve professional competence, to ensure the quality of education in Israeli Arab schools.

The theoretical importance of this research lies in highlighting the scientific arguments related to the importance of developing the sense of ability of teachers and improving their attitudes towards the integration of music in teaching and raise the effectiveness of music integration; in explaining the importance of having a model of music integration (MIM) to help teachers integrate music into the teaching process, in developing methods and frameworks for music integration that can help teachers integrate music into teaching and they feel capable to do this, although they are not experts in music and in exploring the methods of integrating music that teachers use, but also tend not to use.

The objectives of the research are:

O1: establishing the theoretical premises for the integration of music in the didactic process;
O2: identification of psycho-pedagogical conditions that would generate positive attitudes and a high effectiveness of the Israeli teaching staff in terms of musical integration in the teaching of other disciplines;
O3: identifying teachers' attitudes and sense of abilit regarding music integration in the teaching process of Israeli Arab schools;
O4: determination of psycho-pedagogical landmarks for the integration of music in the teaching process of Israeli Arab elementary schools;
O5: elaboration and experimental validation of the Model of musical integration (MIM) in the didactic process of other disciplines; and see its effectiveness.
O6: establishing important epistemological landmarks of music integration in teaching in terms of teacher attitudes and the effectiveness.

This study examines the differences in attitudes and sense of ability of teachers, and the effectiveness of music integration which could be found after the exposure and application of the "Music Integration Model" (MIM).

The MIM model (Diagram 1) is formed and exposed to teachers and principals during school meetings. The model includes the following baselines:

1. Exposure to music integration value and benefits.
2. Exposure to various ways and methods of integrating music in teaching. Integrating music not only in the classroom.

3. Personal support and guidance of a professional team. They are not alone, they can get help and support from the music teacher.
4. Building a school plan and an adapted professional model with the principal and the disciplinary professional team.
5. Encourage and empower teachers to integrate music in teaching and that they can do it.

Nine parameters of teachers' attitudes regarding the effect of musical integration (emotional, social, cognitive, motivational, motor, behavioral, achievement, class management effect and general personal attitudes) and eight parameters of teachers' musical integration implementation (using music as background, content songs, creativity, out-of-class music, external talent, performance, music and arts, use of music at the beginning / end of the lesson and sense of teachers' ability to apply these methods) was checked before and after using "MIM":

The study also examined whether there is a relationship between teacher education, teaching, music education and experiences - as well as their attitudes and effectiveness in integrating music into teaching disciplines, within the parameters mentioned above.

The aim of the study is also to meet the characteristics and ways of integrating the music used in teaching by elementary school teachers.

The epistemology of research is based on educational, didactic, psycho-pedagogical and methodological theories, concepts and ideas.

The research methodology included several methods: theoretical methods: synthesis, generalization, classification, systematization, comparison, modeling, surveys; empiric methods: observation, testing, questionnaires, conversations, ascertaining, formative and control experiments; statistical methods: Cronbach's alpha, pupils' t test for independent samples, pupils' t test for a single sample, two-way analysis of variance, one-way analysis of variance etc.

At the level of theoretical conceptualization: scientific and bibliographic documentation, epistemological synthesis and induction, deduction, conceptual analysis, theoretical modeling, hermeneutic analysis, argumentation, modeling of the pedagogical experiment, observation, data collection, statistical analysis, systematization, interpretive synthesis, etc.

At the experimental level: questionnaires, interviews, pedagogical experiment (diagnosis, training, control).

The experimental basis of the research was a sample of 80 teachers in elementary Arab schools in Israel. The description of the sample can be found in the subchapter related to the sample.

Scientific innovation consists in identifying the attitudes and sense of ability of teachers and the effectiveness of music integration in the Arab primary school, exposing teachers to the model of music integration and examining their attitudes and the effectiveness - after which, some schools have decided to apply the model.

The practical value of the research is supported by establishing the difficulties faced by teachers in integrating music in teaching, in analyzing introductory programs aimed at facilitating the musical integration of teachers in teaching, in developing and validating a set of pedagogical tools set out in the Music Integration Model (MIM) and by formulating practical recommendations that address the content and importance of improving teachers' attitudes towards music integration and the effectiveness of MIM model, and by providing them with a framework in which they feel able and willing to integrate music into teaching. Moreover, this research recommends the inclusion of a music integration course for trainee teachers while studying at the University. By addressing a wide range of issues, research results can significantly improve the teaching process.

Thesis submitted for defense

1. The formative value of the musical integration model (MIM) is demonstrated by obtaining a significant change in teachers' attitudes as a consequence of the effectiveness of the MIM musical integration model in students in several aspects (emotional, social, cognitive, achievement, motivational), as well as by achieving a significant change in the teachers' sense of ability to apply and use methods of musical integration.
2. Exposing and applying the music integration model (MIM) in the teaching process helps teachers to gain positive attitudes and feel more capable in music integration and achieve more effectiveness of music integration on teaching.
A. After using the "music integration model" (MIM), teachers have more positive attitudes towards integrating music into teaching than before using the model.
B. After using the Music Integration Model (MIM), teachers achieve a more positive sense of ability in using music integration methods in the teaching process than before using the model.
3. There is a positive correlation between music education and teachers' experience, on the one hand, - and their effectiveness and attitude towards the integration of music in teaching, on the other.
4. There is a significant difference in the attitudes and sense of ability of language teachers, as well as science, mathematics and religion teachers towards the integration of music in teaching.
5. There is a positive correlation between teachers' attitudes and the sense of ability in integrating music into the teaching process.

Approval and implementation of scientific results:

Teaching materials developed during our investigation, methods of integrating music in teaching, such as the use of background music, the use of content songs related to the material taught, the use of music at the beginning of each lesson, the use of music at the end of each lesson, encouragement the creativity of learners, such as composing a song based on a learned text or composing a song related to the content of the lesson, inviting teachers or parents with musical talent to sing or perform songs related to the learned material of the lesson, using musical integration outside the classroom , such as playing songs during the active break or publishing songs on the school website, asking students to sing in front of the class and perform or play music on the lesson and using the combination of music and arts in teaching the lesson.

These methods have been implemented in training seminars for teachers and inspectors at the Israeli Ministry of Education. Moreover, the MIM model developed during the research was presented at the "Music Education" student seminar at Tel Aviv University and at the "Felharmonic" conference in Jerusalem. The educational process of the MIM model was carried out in the Israeli Arab elementary schools in Galeeli and the Negev.

Moreover, the topic of using music in Muslim religion lessons was implemented at Levinsky College in Israel at a seminar for students of the Faculty of Music Education in Israel and in the "Seminar for Music and Culture" for academics at the Sebelius Academy in Finland. The researcher also participated in four international symposia at Levinsky College.

Conference publications and communications:

1. Articles in journals from the National Register of profile journals, category C

1. BADARNE B. The Impact of music upon attention, attitude and motivation În: Artă şi educaţie artistică, Nr.1 (21), 2013 p. 58-60. ISSN:1857-0445
https://ibn.idsi.md/sites/default/files/imag_file/The%20impact%20of%20music%20upon%20attention%20attitude.pdf

2. BADARNE, B., COCIERU, N. The correlation between music and elementary school disciplines (English, Mathmatics and Religion). In: Acta et Commentationes. Education Sciences. Science magazine. Chisinau: UST 2017, no. 2 (11), pp. 126-131. ISSN:1857-0623
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

2. Articles in recognized forgien journals

3. BADARNE, B., ERRLICH, A. 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://link.springer.com/chapter/10.1007/978-3-030-21029-8_3

4. BADARNE, B., ERRLICH, A. Intercultural music teacher education in Israel: Reimagining religious segregation through culturally responsive teaching. In: Visons 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. Materials at international conferences abroad

5. 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. https://program.eventact.com/Lecture/143861/2763809

6. BADARNE, B., MUALEM, R., 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.researchgate.net/publication/352059011_Improvements_in_Cognition_and_Educational_Attainment_as_a_Result_of_Integrating_Music_into_Science_Teaching_in_Elementary_School

4. Materials at international conferences (Republic of Moldova)

7. BADARNE, B. The impact of music upon attention, attitude and motivation. În: Ion Gagim și universul muzicii. Materialele conferinței științifice internaționale consacrate aniversării a 60 de ani ai savantului: Iași, 2014, pp. 64-67. ISBN: 978-606-547-192-4.

5. Conference materials with international participation

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. ISBN:978-9975-76-239-7
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

CONTENT OF THE THESIS

The Introduction describes the relevance and importance of the research problem, as well as the purpose of the research, the objectives, the novelty and the value of the research. It also includes the theoretical and practical significance of the research, the main results of the investigation and the summary of the thesis chapters.

CHAPTER 1, Theoretical approaches and epistemological aspects regarding the integration of music in the teaching process presents theoretical approaches and epistemological aspects of the integration of music in teaching. Theoretical concepts and attitudes regarding the integration of the arts in teaching and the origin of the integration of the arts in general are defined.

The second part of Chapter 1 deals with the psycho-pedagogical dimensions of music integration in the teaching of other disciplines, the benefits of teachers who implement music in their programs and the effects of music on brain, concentration, achievement, development, discipline and classroom management, behavioral problems, motivation, productivity and performance. Moreover, this part presents the effects of musical integration on feelings; anxiety, stress and tension. At the same time, the effects of music on learning skills are discussed.

The third part of Chapter 1 deals with the correlation between music and elementary school subjects (language; foreign languages, mathematics, science and religion). The main focus was on Islam, because the religion taught in research schools was Islam.

In CHAPTER 2, the Impact of musical integration in the teaching of other disciplines in the educational system is presented. Then, in this chapter, the basic program of music education is presented, as well as the national standards for music education. In the next part of this chapter, Methods and techniques for integrating music in the teaching of elementary school subjects are developed. In this context, the attitude and effectiveness of teachers regarding the integration of music in the teaching of other disciplines is diagnosed.

In this order of ideas, the model of music integration (MIM) in teaching school subjects is oriented towards the development of teachers' attitudes and sense of ability towards music integration. This chapter presents the MIM model and its functionality.

CHAPTER 3, Methodological perspectives of music integration in the teaching of other disciplines is divided into three parts. The first part deals with determining the attitudes and sense of ability of teachers towards the level of musical integration, and th eeffectiveness of applying the MIM model. It includes the presentation of the research methodology and the finding experiment. Subsequently, the second part deals with the formative value of the musical integration model (MIM) in the teaching of other disciplines and the research results before and after the application of the model and with or without teachers' musical experience. The last part presents the validation of each thesis, as well as the conclusions and recommendations of the research. The general conclusions and recommendations represent the synthesis of the results of our research, as well as recommendations for actions in the systemic field and for further research.

The MIM model

The Musical Integration Model for the integration of music in the teaching of other disciplines - MIM

MIM is a model that suggests an optimal way to integrate music into elementary school teaching. The intervention of the MIM model included two main elements:

1. A music integration course. During the course, teachers were exposed to the benefits and positive effects of music integration in teaching disciplines. And they were offered practical tools for music integration (8 methods of music integration).
2. After the course, the teachers were asked to integrate the music in their lessons and to use the tools and methods they learned in the course and to apply them in the teaching process.

1. The course- The first step of the MIM Model:

First, a course about integrating music in teaching should be conducted for the teachers of the 6 disciplines in the school. This course had three main elements:

a. An exposure to the benefits and value of integrating music in teaching.

b. An exposure and practice to ways and methods of integrating music in teaching.

c. A specific attention should be on giving the teachers empowerment and encouragement that they are able to integrate music in their teaching lessons.

Teachers were asked to apply the ways of integration they learned in the course in their lessons, to try them so they will feel capable to do it, and raise the efficacy of the teachers. The course included 10 meetings. Each meeting focused on teaching the teacher a method of integration. The methods taught in the course are detailed in the following points. These 10 meetings included the following subjects. Theses ways of integration that was presented in the course are the same ways teacher used: The content of each meeting is detailed in the thesis.

Course meeting 1: Integrating music in teaching- why? Benefits and value

In this meeting, teachers were exposed to the benefits of integrating music in teaching: the benefits that they were exposed to are emotional, social, cognitive, achievements, motivational, behavioral, class management, and motoric.

Course meeting 2: Integrating music by using background music

In this meeting, teachers were exposed to ways of integrating music by background music.

Teachers were asked to experience the effect of the music by themselves. During the course meeting, they were given a task and a background music was played. They shared their experience, feelings and the impact the background music had on them.

Course meeting 3: Integrating music by using content songs

In this meeting, teachers were exposed to various content songs in various subjects and languages. For each discipline, it was offered few content songs specifically for it and appropriate to the content of the curriculum and according to the content the teaching books. Part of these songs were written and composed by me.

For Arabic lessons content songs such as: "an appreciated girl", "a village in a valley", "our fields" was exposed.

For Hebrew lessons content songs such as: "two friends", "the fig tree" was exposed.

For English lessons content songs such as: "the ant and the grasshopper", "old McDonald", "The wheels of the bus". English teachers received guidance to use content songs they have in the English teaching books of "Click".

For Math lessons content songs such as: "the song of angels", "the songs of geometric shapes", "and the multiplication song". In addition, in math, beats were used to count and understand numbers, and sequences.

For science lessons content songs such as: "electricity song", "metals songs", "and the solar system".

For religion lessons content songs such as: "Al-Adha holiday", "Ramadan", "Mohammad our prophet". It is important to mention that a lot of caution was taken when representing content

songs in a religion lesson contest. The melody of the songs should be very simple and without using music instruments except of percussion because this is not acceptable in Islam. The content songs that were used in the religion lesson could not use the Quran's words. It is also not acceptable to do so according to the Islam.

Course meeting 4: Integrating music by using Creativity

In this course meeting, teachers were exposed to ideas for using music creativity in order to learn. The specific benefit and use of this type of music integration was exposed. Students were asked to compose songs and melodies to learnt text.

Course meeting 5: Integrating music by using Music Outside the classroom

In this course meeting, teachers were exposed to ideas how they can use music outside the classroom in order to help pupils learn more effectively. The ideas that were suggested included playing music or songs that is related to the lesson in the morning at school, or during the breaks, or pedagogical days in school. Furthermore, it was offered for teachers to integrate music related to the lessons by using the website.

Course meeting 6: using external talent

In this course meeting, teachers were exposed to ways to use external talents in order to integrate music in the lesson. Like, teachers, parents. Teachers were suggested to invite parents who sing or play an instrument in order to connect the outside to the classroom also. Teachers in this meeting experienced in using their own talent. Teachers were asked to find a talent in them that is related to music and use it in the course meeting.

Course meeting 7: using performance

In this course meeting, teachers were exposed to ideas for using performance in order to learn. The specific benefit and use of this type of music integration was exposed.

Course meeting 8: using music and arts

In this course meeting, teachers were exposed to ideas for using the combination of music and arts in order to teach pupils in class. Such as using drama and music for a specific content they have in the lesson, or to a specific idea in the text. Teachers were asked to choose content from the materials they teach and create a play and singing in it. Another example is using drawing and music of a main idea in the text or in the lesson.

Course meeting 9: using Opening/closing music

In this meeting, teachers were exposed to various songs in various subjects and languages that can be used to start a lesson or to close a lesson. These songs are usually contains of good morning, hello, welcoming content, or a goodbye, thank you content.

Opening and closing songs that were suggested are "hello my teacher in science lesson", "we had a nice lesson", "my love welcome to the lesson", "thank you thank you".

Course meeting 10: summary and reflection

In this meeting the teacher was exposed to a brief revision and a summary of all the main ideas in the course. In addition, teachers were asked to make a reflection and share what have they learned during the whole course, and how did the course affect them.

Teachers shared many positive attitudes towards the course. They said that the course has benefited them and encouraged them to integrate music in their lessons. They said that they felt a lot of empowerment and feel capable to use music integration tools in teaching.

1. **Applying the music integration methods- the second step of the MIM model:**

After that, teachers leaned tools and methods of integrating music in teaching, they were asked to apply them in their lessons. While applying them the researcher accompanied them. He was available to each question, or any help. He was visited the school three times a week and made

sure that teachers are applying the methods and was available for them if they needed to ask something or needed any help.

Principals from two schools decided to use MIM while integrating music in teaching. MIM was used in the treatment group (the intervention). For each discipline, a work plan was conducted by the staff in the school, to fit the subjects in the discipline curriculum. The work plan was formed by each discipline staff with the help of the researcher. The staff decided to integrate music for three lessons a week. This frequency is intensive compared to the frequency the music integration is usually used in schools.

Characteristics of the model MIM:

This study formed a "music integration model" MIM that is related to the curriculum of 6 main disciplines: Arabic, Hebrew, English, Math, Science, and Religion. The suggested methods are not only songs, but a wide spectrum of various techniques of integrating music in teaching that was suggested to the teachers in the course, such as using background music, asking students to compose songs and melodies to a learned text, and perform it in front of the class and the school, and inviting teachers or parents who got music talent to perform in front of the students.

The MIM model does not tell the school what to do exactly, and which activity they must use in classes. The model suggest that the music integrating staff and the school disciplines staffs should sit and form lessons plan using the ways of integrating music suggested. The model suggests a work method that contains the basic lines of integrating music in teaching.

The integration is suggested to be not only in the classroom, but also in the break during school time, in the morning when pupils come to school and at home as homework or a virtual lesson through the internet. The integration is suggested to break out the borders of the classroom. In addition, to be in the pupil's everyday life.

In addition, the model of integrating music (MIM) that is suggested in this research offers methods that encourages high levels of thinking, like developing creativity. It is suggested not only to use the low first level of information, but also the high levels of creativity.

Moreover, the MIM works on involving talented teachers and talented parents in the integration of music in teaching. Parents' intervention in the pupils' school-life is very recommendable when it comes to pupils' learning and education.

The MIM emphasizes the importance to empowerment and encouragement of teachers so they can integrate music in their teaching, in order to raise the sense of efficacy of teacher with regard to integrating music in teaching.

The suggested MIM model puts a major significance to processes of evaluation and monitoring the implementation of the model in school. This approach suggests that without really monitoring and continuous tracking of any project in school it will not succeed.

Furthermore, a great deal of attention is given to peer learning through observations of music integrating lessons by teachers from the same discipline. For example, a teacher of math integrates music in his lesson while math teachers team observe his lesson. This opens an opportunity to peer learning through after lesson feedback.

This research highlights the issue of integrating music in teaching, and examines the attitudes and efficacy of teachers in Israel towards the music cooperation.

The "MIM" model (see Diagram1) is formed and exposed to the teachers and principals in school meetings. The model includes the following basic lines:

1. Exposure to music integrating value and benefits.
2. Exposure to several ways and methods of integrating music in teaching. Integrating music not only in the classroom.

3. Personal support and guidance of a professional team. They are not alone they can use the music teacher.

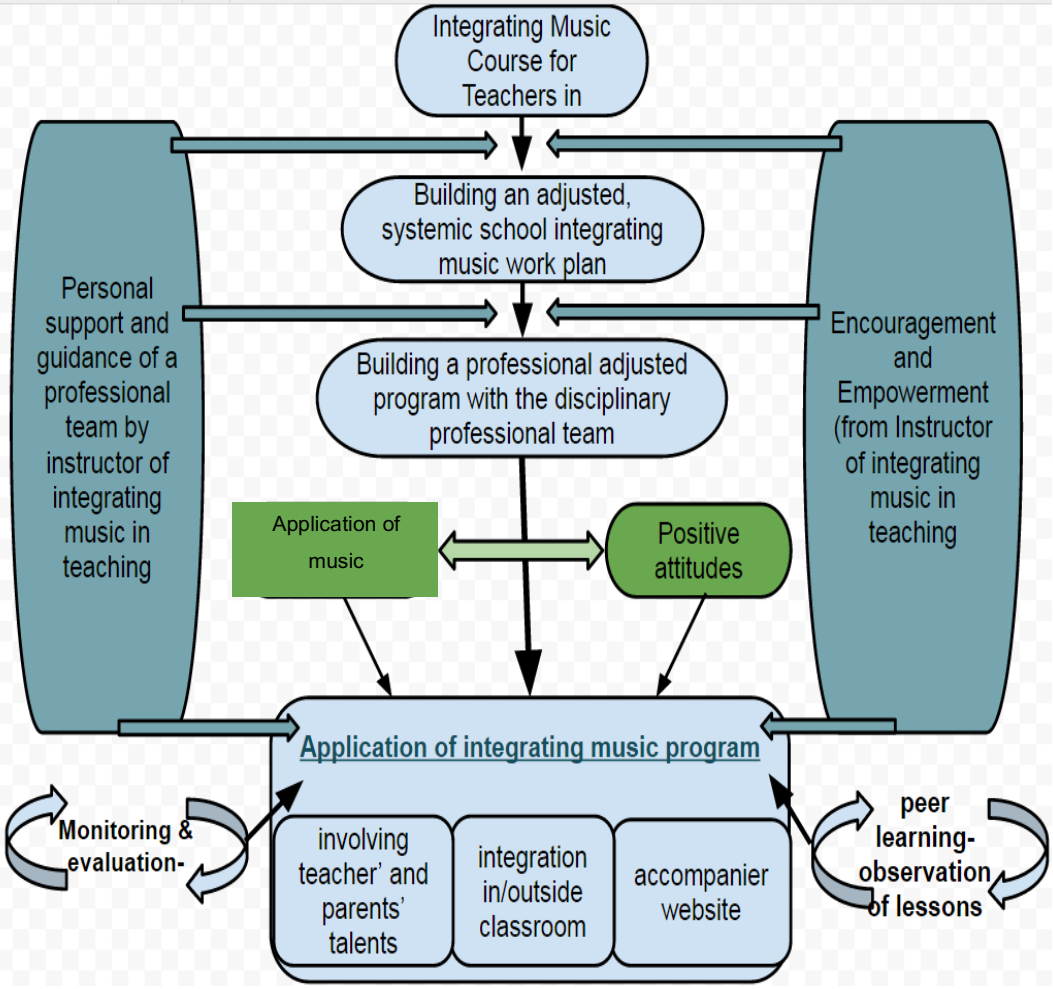
4. Building a school plan and a professional adjusted model with the principle and the disciplinary professional team

5. Encouragement and Empowerment to the teachers that it is easy and they can do it.

The MIM model was formed and molded straight from the field of education. It gives the school a frame work in which they can use music integration in teaching. The model does not tell the school what to do exactly, and which activity they must use in classes. The model suggests that the music integrating staff and the school disciplines staffs should sit and form lessons plan using the ways of integrating music suggested. The model suggests a work method that contains the basic lines of integrating music in teaching.

MIM Model:

This diagram presents the MIM model- and contains all the important component of it.



Explanation of the Model diagram (MIM):

First teachers took an "**integrating music course**", in which they were exposed to all of the integration methods that they should use in their teaching as it was detailed before.

Second management team (which includes coordinators for each discipline) built a **school work-plan for music integration**, which is presented, in table I. the music teacher of the school was involved and all the process was supervised by the author of this research.
The third step was that each coordinator of each discipline built a **professional program** with the disciplinary team: Arabic, English, Hebrew, mathematic science and religion. The programs included suggestions that the researcher gave to the team. In addition, all the programs included all music integration ways that is checked in the research.

These first three steps of "integrating music course", " building a school work-plan" and "building a professional program with the disciplinary team" intend to give the teachers higher **sense of efficacy** and more **positive attitudes** toward integrating music in teaching.

The fourth step was to **apply the music integration program**, each teacher in his lesson. Teachers applied the following methods in their lessons:

using Background Music, Content Songs, Creativity, Music Outside the classroom, External talent, Performance, Music and arts, Opening/closing music.

The application of music integration included integration **inside and outside the classroom**. It included involving **teacher' and parents' talents**. In addition, it included an **accompanier website**.

Through all this process, the music integration instructor which is the researcher of this research accompanied the team in order to give them personal **support** and **guidance**, and **encouragement** and **empowerment** that they can do it.

Two development mechanisms were used in order that teachers learn from the process they experience. Teachers were asked to invite the discipline team to observe the music integration lesson they do. **Peer observation** is a very good opportunity for teachers to learn from each other and empower each other. In addition the music integration instructor (the researcher of this research) made **monitoring and evaluation** of the process each week.

The model MIM 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 model very functional to teachers and schools.

The model MIM is written in a very detailed way so teachers and school principals can use it easily.

The model MIM is holistic and includes many dimensions that could be beneficial to the pupil during learning. Music Integration in teaching can be very helpful for pupils in many dimensions:

1. It contributes to the emotional state of the pupil while learning (lower anxiety, stress and tension, strengthen self-confidence and sense of ability, makes more enjoyment).
2. It also contributes to the social aspect of the pupils while learning. It creates a positive social atmosphere and contributes to cohesion. It improves the positive relation among the students and between the pupil and his teacher.
3. It also increases motivation and enthusiasm of the pupil, and be are more active.
4. It also contributes to cognitive aspect like understanding and internalizing the material, memorizes it, creativity, clarification of the material, absorbing the material studied.
5. It also contributes to raising achievements.
6. It also helps the pupil in the behavioral aspect like raising focus and concentration in the lesson, and decreasing discipline problems.
7. It also helps the teacher in the class management

8. It also helps the pupil to improve his motoric skills like fine motoric skills, crude motoric skills.

The dimensions that are benefited by integration of music in teaching are Emotional, Social, and Cognitive learning effect, Motivation, Motoric effect, Behavioral effect, Achievements, Classroom Management, and General personal attitudes

Furthermore, the suggested model (MIM) 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.

In this research, the MIM model was applied in the classroom. this model included many integrating ways, and many elements that thought to be influential for teachers attitudes and efficacy, like involving teachers' and parents' talents, integration of music in and outside the classroom, accompanier web-site. In addition, this model included supportable factors, such as applying music integration tools for the teacher, encouragements and empowerments 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.

After the formative experiment in this research, the 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.

The education process is as much about mental and character formation as it is about information and subjects. The formative value of the MIM model that was done in school is as important as—if not more important than—the actual content of the MIM model. For example: Math teaches logical, accurate, precise thinking; history teaches judgment, discernment, prudence; literature teaches sensitivity to the human condition; penmanship teaches the beginning student the basic skills of concentration, accuracy, correct spelling, and the patience and persistence required to do quality work.

Methodological Perspectives of the Research

The present research has been conducted according to the mixed methods approach using quantitative and qualitative methodology.

The experimental basis of the investigation

Study population constituted a population sample of 80 teachers in 4 primary Arab schools in Israel who teach, in 3rd grade and 4th grade, one of the following subject: Arabic, Hebrew, English, math, science, and religion. It is a heterogeneous group in terms of sex, age, marital status, seniority, academic education, musical experience, and teaching field. The sample consist of 30% males and 70% females. The average age of the sample is 41. 90% of the teachers are Moslems, 10% are Christians. All of the teachers are permanent teachers. The average seniority is 15 years. All of them are married. 80% of them have BA degree, 20% of them have MA degree.

Most elementary school teachers are now in the "Ofek Hadash" program; a reform that the ministry of education initiated in Israel. Teachers in "Ofek Hadash" are rewarded with higher wages than they received before they entered the program. They must under this reform program study 60 hours per year. And they are financially rewarded overtime that they do during the

afternoon hours. This population of this study was chosen randomly from teachers –in 4 primary schools (20 teacher from each school). This study population is divided into 6 groups:

1. 16 Languages teachers: Arabic
2. 12 Hebrew teachers
3. 14 English teachers
4. 12 Science teachers
5. 12 Math Teachers
6. 8 teachers of religion

In the analysis process, these groups were divided as the following:
The 4 subjects groups are:

A. Arabic and Hebrew
B. English
C. Math and Science.
D. Religion.

The main research tools were questionnaire and interview as listed below:

Questionnaires:

In the current, study 3 types of questionnaires:

1. Biographical questionnaire, which will ask on the following data for each teacher:

Age, gender, teacher education, field of teaching, role in school, his musical education, frequency hearing the music, play or poetry.

2. In the research a questionnaire of teachers' attitude toward the effectiveness of the MIM model in 9 aspects is used. This questionnaire is for teachers to examine their attitudes towards integrating music in teaching. The detailed specification of each question is found in the thesis
3. I in this research a questionnaire of teachers' efficacy (sense of ability) to use and apply music integrated methods (8 methods are include and a general sense of ability of music integration) in teaching is used. The detailed specification of each question is found in the thesis

Scientific innovation consists in identifying the attitudes and efficacy of teachers in elementary Arab school, exposing them to music integration model (MIM) and examining their attitudes and efficacy again- after the intervention.

Interviews:

Interview of 10 teachers was conducted. These interviews engaged characteristics of music integration and ways of integrating music used in teaching elementary school teachers, their attitudes toward music integration and their efficacy to use music integration methods. Difficulties they faced, and things that helped them face these difficulties.

Procedure:

This experiment is organized in 3 stages:

1. Diagnosis.
2. Formation.
3. Control.

1. during the first stage, the level of the variables: teachers' efficacy and attitudes toward integrating music in teaching and the ways, methods teachers use to integrate music in their teaching is determined. 80 teachers fill 3 questionnaires about their efficacy, 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).

The experimental group contains teachers from two schools. These two schools had 8 meetings in which they were exposed to many ways of integrating music in teaching. In addition, they were exposed to an integrating music model. In each school, the principles chose to integrate music in teaching. Thus, 20 teachers in each school were exposed and experienced music integration in teaching. The "music integration model" MIM was a suggested model in the exposure of music integration meetings. The following disciplines were participating: Arabic language, Hebrew, English, Math, Science and Religion (Islam), for grade 3 and grade 4 classes. Total number of the teachers who were exposed to the model of integrating music in teaching is 40.

The control group also contains teachers from another two schools. From each school 20 teachers participated in the research. These teachers were not exposed to ways of integrating music in teaching and did not know the model MIM. The teachers who participated in the research teach the following disciplines: Arabic language, Hebrew, English, Math, Science, and Religion (Islam), for grade 3 and grade 4 classes. Total number of the teachers in the control group is 40.

2. During the second stage two principles decided to integrate music after they were exposed to ways of integrating music and to the music integration model MIM, including methods, techniques, principles (elaborated previously) in eight meetings after school, only to the experimental group.

3. In the third stage, called control, the efficiency of the methodology, methods and techniques of the music integration model (MIM) is checked. In this stage, participate both groups: experimental group and control group. The same variables that were checked during diagnosis is checked again after the exposure of the integrating music methods and experiencing music integration in two schools. That is how the efficiency was checked.

The same 80 teachers in the research population will answer again the same two questionnaires about their efficacy and their attitudes towards music integration in teaching.

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

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 efficacy of elementary school teachers toward integrating music in teaching in the elementary school.

2. In addition the research examined the effect of using the MIM on attitudes and efficacy among the teachers. This study examined the difference that the research formed model- "music integration model" (MIM), will make, as opposed to the traditional music integration ways that teachers generally use.

3. The research examined eight dimensions of teachers' attitudes and eight dimensions of teachers' efficacy toward integrating music.

Table 3.4- Dimensions of attitudes and efficacy

Attitudes- toward the effectiveness of integrating music in teaching in 9 dimensions	**Efficacy- toward 8 ways of integration music in teaching and general sense of ability**
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 efficacy toward integrating music in didactic disciplines, by mentioned techniques. The purpose of the study is also to meet the characteristics and ways of integrating music typically used in teaching by elementary Arab schoolteachers in Israel.

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

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

The research checked teachers' attitudes toward music integration and their sense of ability (efficacy) to use 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 MIM model.

The criteria in which the efficiency (effectiveness) was measured regard 8 criteria:

1. Cognitive effect: teachers inform that after applying the of MIM model, the intervention helped the students to understand, internalize, and memorize the material better. In addition, 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 of MIM model, the intervention helped the students to feel more enjoyment, and more self-confidence and more ability to express themselves. In addition, 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 of MIM 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 of MIM model, the intervention helped to improve the relationships among the students, and between the students and their teacher. In addition, 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 of MIM model, the intervention improve the enthusiasm among the students, and students became more active. The difference in the motivational effect between before and after the intervention is significant.

6. Achievements: teachers inform that after applying the of MIM 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. Positive change in the attitudes of the teachers toward music integration: teachers inform that after applying the of MIM model, they have more positive attitudes towards music integration effect on teaching. The difference in attitudes between before and after the intervention is significant.

8. Positive change in the efficacy of teachers in applying the methods of music integration: teachers inform that after applying the of MIM model, they have more positive efficacy in using and applying the methods of music integration. The difference in efficacy between before and after the intervention is significant.

Results of the research show:

In the experimental group, there were significant changes in the attitudes of teachers towards the effectiveness of the MIM model. The changes were reflected in each of the aspects. However, in the control group, there were no significant changes in the aspects: Emotional, Social, Motoric, and Classroom management. In the control group, attitudes were improved in the aspects: cognitive, motivational, behavioral, achievements and General.

In the experimental group, there were significant changes in the efficacy (sense of ability) of teachers regarding using and applying music integrating methods in teaching. 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 significant changes in the aspects. In the control group, efficacy was improved a little in the aspects: background, creativity and using external talents.

Teachers with musical experience had more positive attitudes toward integrating music in teaching, more than teachers without musical experience. These teachers are from the experimental group before the exposure to the MIM model.

Teachers with musical experience had more positive attitudes toward integrating music in teaching, more than teachers without musical experience. These teachers are from the experimental group after the exposure to the MIM model.

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 yet had significantly more positive attitudes towards the integration of music than teachers without musical experience in the experimental group, after exposure of MIM. The differences were reflected in each of the aspects.

Teachers with musical experience had more positive efficacy regarding integrating music in teaching, more than teachers without musical experience. These teachers are from the experimental group before the exposure to the MIM model.

In the experimental group, teachers with musical experience had more positive efficacy than teachers without musical experience. The differences were reflected in each of the aspects.

There are significant differences in teachers' attitudes between the groups of subjects in any of the 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 any of the aspects.

There are significant differences in teachers' efficacy between the groups of subjects in any of the aspects. Post hoc Tukey -type tests showed that the differences stem from the fact that the

efficacy of teachers of math- science and religion, significantly lower than the efficacy of teachers of Arabic-Hebrew and English. In the aspect of: content, open/close, creativity, performance.

It was found that there is a significant positive correlation between attitudes of teachers with regard to music integration, and teachers' efficacy.

It is noticeable that the correlation is at a very high level of significance (0.01).

The formative value of the MIM model:

The exposure and application of music integrating model in the process of teaching will help teachers to have more positive attitudes and higher efficacy towards integrating music.

The formative value of the MIM 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 model can lead a change in the methods of teaching.

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

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

In addition, by applying this 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 model permitted uploading questions and unconventional thought concerning music and Islam religion. Teachers started thinking outside an ambivalent social frame. Moreover, 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.

Discussion and Conclusions

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 “music integration model” (MIM) teachers have more positive attitudes towards integrating music in teaching than before being exposed to the model.

The attitudes of teachers in experimental group got much higher after being exposed to the MIM 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 is useless. After being exposed to the MIM 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 MIM 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 positive 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 music integrating model (MIM), in other schools and heard some very positive attitudes about integrating music in their teaching. Furthermore another explanation could be is 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 suggest 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 MIM 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 MIM on attitudes and application of music integration among the teachers. After being exposed and using the "music integration model" (MIM) teachers will have more application of music integration than before being exposed to the model. The application of music integration methods of teachers in the experimental group got much higher after being exposed to the MIM 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 is very difficult and they didn't use methods of integrating music in their lessons. After being exposed to the MIM model they thought it is not so hard to integrate music in their lessons and they actually integrated music in their lessons. Teachers also said in the interviews that while being exposed to the 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 actually integrating it within the curriculum.

Although teachers may satisfy the objectives of music integrating course, 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 actually 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 model of integrating music in teaching (MIM) 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 meaningful integrated curriculum is a complex process in which all of 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 have a tendency to feel a higher level of satisfaction with their preparation during their training in a methods class. If teachers are able to 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 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.

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 little 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' sense of ability in general was low in all the research population (except for teachers who had a musical background) before the exposure to the program MIM. Abril and Gault [1] found that music plays a secondary role to other curricular activities. Malin [78] explains that a number of 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 of this finding, teachers in the experimental group showed a very high application of music integration and positive attitudes after applying the integration model MIM. This implies that teachers have many musical abilities and talent but they don't know about it. 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 MIM model and applying, it 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 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 MIM model.

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 integrating models of integrating music in teaching (MIM) to teachers in schools.

4. The forth conclusion is concerned with 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 MIM.

After exposure to MIM teachers of math, science and religion had more positive attitudes and higher application of music integration than before the exposure to MIM.

In the interviews these teachers explains 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 is 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.

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 ways 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].

The lack of formal requirements (e.g., guidelines, testing) and materials (e.g., resource books and textbooks) imply that integration is the teacher's (or the team's) responsibility 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 hypothesis in larger population. I would like to make a research with a larger number of participants.

General Conclusions

The theoretical and practical results addressed the determined objectives at the beginning of the research and contributed to substantiation of the *Pedagogic model for developing novice teachers' professional identity through mentoring* that represents the **scientific problem solved in our research**. Synthesis of the data led us to the following conclusions:

1. The "music integration model" (MIM) helped teachers to have more positive attitudes towards integrating music in teaching.
2. The "music integration model" (MIM) helped teachers to do more application of music integration.
3. Teachers who are with a previous musical education had more positive attitudes and higher application of music integration in teaching.
4. Teachers who teach languages have more positive attitudes and higher application of music integration in teaching, than teachers who teach math, science and religion in all measures.
5. Teachers who have positive attitudes have a high application of music integration methods, and teachers who have high application of music integration have more positive attitudes towards music integration in teaching.

ABSTRACT
Belal Badarne

Doctoral thesis in Pedagogy, Chisinau, 2021

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Autoreferatul
tezei de doctor în ştiinţe pedagogice

CHIŞINĂU, 2021

Appendix:

Table 3.5: Differences in attitudes before and after the exposure to the MIM In the experimental group

Attitudes (Experimental group)					
Category	Before		After		T
	Average	SD	Average	SD	
1. Emotional	2.01	0.84	3.85	0.66	14.89***
2. Social	2.08	0.70	3.65	0.74	15.55***
3. Cognitive	1.89	0.69	3.62	0.60	16.88***
4. Motivation	2.09	0.83	3.90	0.72	12.88***
5. Motoric	1.75	0.46	3.30	0.84	12.39***
6. Behavioral	1.94	0.61	3.16	0.57	11.49***
7. Classroom Management	2.09	0.55	3.86	0.74	13.52***
8. Achievements	2.02	0.85	.391	0.64	79.14***
9. General personal attitudes	2.41	0.87	3.56	0.93	8.36***

*** 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 MIM model.

Table 3.6: Differences in attitudes before and after the exposure to the MIM In the control group

Attitudes (Control group)						
Category	Before		After		T	**Sig.**
	Average	SD	Average	SD		
1. Emotional	1.74	0.50	1.80	0.39	0.82	0.412
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***	0.001
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***	0.001
7.Classroom Management	1.88	0.53	1.99	0.53	1.25	0.218
8. Achievements	1.73	0.52	1.81	40.0	0.83	0.413
9. General personal attitudes	2.06	.079	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 MIM model.

Table 3.7: Differences in efficacy (sense of ability) of music integration before and after the exposure to the MIM

In the experimental group

Efficacy application (Experimental group)					
Category	Before		After		T
	Average	SD	Average	SD	
1. Background	1.10	0.23	3.34	1.17	12.31***
2. Content	1.48	0.55	3.17	1.01	11.40***
3. Creativity	1.37	0.59	2.81	1.51	7.09***
4. Outclass	1.08	0.14	2.91	1.08	10.96***

5. External	1.05	0.15	2.66	0.98	10.49***
6. Performance	1.19	0.22	2.29	0.83	9.43***
7. arts	1.16	0.28	2.90	0.96	10.85***
8. Open/Close	1.31	0.48	3.05	1.03	10.28***
9. general sense of ability	1.11	0.20	3.35	1.27	12.31***

*** p< 0.001

Table 3.7 summaries the averages of efficacy of teachers in the experimental group in the 8 methods checked in the study. Table 3.7 compares these averages before and after the exposure to the MIM model.

Table 3.8: Differences in efficacy before and after the exposure to the MIM In the control group

Efficacy (Control group)						
Category	Before		After		T	**Sig.**
	Average	SD	Average	SD		
1. Background	1.08	0.19	1.30	0.33	3.59***	0.001
2. Content	1.30	0.45	1.41	0.46	1.83	0.074
3. Creativity	1.12	0.29	1.27	0.45	2.22	0.032
4. Outclass	1.06	0.13	1.16	0.25	2.15	0.038
5. External	1.05	0.18	1.19	0.21	3.56	0.001
6. Performance	1.10	0.13	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	1.17	0.33	1.32	0.38	2.30	0.027
9. general sense of ability	1.09	0.18	1.31	0.43	3.59***	0.001

*** p< 0.001

Table 3.8 summaries the averages of efficacy of teachers in the control group in the 8 methods checked in the study. Table 3.8 compares these averages before and after the exposure to the MIM model.