

MOLDOVA STATE UNIVERSITY

**Presented as manuscript
CZU: 376:796(043.2)=111**

SHAMA EINAS

**DEVELOPING POSITIVE ATTITUDES OF PHYSICAL
EDUCATION TEACHERS TOWARDS INCLUSION
OF CHILDREN WITH DISABILITIES**

Specialty 531.01 – General Theory of Education

**ABSTRACT
of the Doctoral Thesis in Educational Sciences**

CHISINAU, 2024

**The thesis was elaborated within the *Department of Education Sciences*,
Moldova State University**

Scientific advisor:

BODRUG-LUNGU Valentina, doctor habilitatus in pedagogical sciences, university professor

Official referents:

RACU Aurelia, doctor habilitatus in pedagogical sciences, university professor

BRAGARENCO Nicolae, doctor in pedagogical sciences, associate professor

Composition of the Specialized Scientific Council D 531.01-23-72:

GORAȘ-POSTICĂ Viorica, doctor habilitatus in pedagogical sciences, university professor,
president

DARII Ludmila, doctor in pedagogical sciences, associate professor, *scientific secretary*

PANICO Vasile, doctor in pedagogical sciences, university professor

RUSNAC Virginia, doctor in psychology, associate professor

CIORBĂ Constantin, doctor habilitatus in pedagogical sciences, university professor

The public presentation will take place on **28 March 2024**, at **13:00**, in the session of the Specialized Scientific Council D 531.01-23-72, within the Moldova State University in Chisinau, study building no.3, office no.505 (Scientific Research Center “*Education and Social Policies*”), 65^A M.Kogalniceanu Street, MD-2069.

The Doctoral thesis and the Abstract can be found at the Scientific Library, the web page of the Moldova State University (<https://usm.md/>) and on the ANACEC web page (www.anacec.md).

The Abstract was sent on 26 February 2024.

Scientific secretary
of the Specialized Scientific Council D 531.01-23-72:
doctor in pedagogical sciences,
associate professor

 DARIU Ludmila

Scientific advisor,
doctor habilitatus in pedagogical sciences,
university professor

 BODRUG-LUNGU Valentina

Author

 SHAMA Einás

CONTENT

CONCEPTUAL LANDMARKS OF RESEARCH	4
THESIS CONTENT	7
GENERAL CONCLUSIONS AND RECOMMENDATIONS	24
BIBLIOGRAPHY	29
LIST OF AUTHOR'S PUBLICATIONS ON THE TOPIC OF THE THESIS	33
ANNOTATION	34
ADNOTARE	35

CONCEPTUAL LANDMARKS OF RESEARCH

Relevance of the research theme

According to UNICEF' data (2018), across Europe and Central Asia, children with disabilities are particularly vulnerable to stigma and discrimination, and are often segregated. Approximately 5.1 million children with disabilities in the region face multiple rights violations, from lack of early detection or diagnosis of disabilities to exclusion from education and participation in their communities [24].

Over the years disability policy developed from elementary care at institutions to education for children with disabilities and rehabilitation for persons who became disabled during adult life. After the Second World War the concepts of integration and normalization were introduced, which reflected a growing awareness of the capabilities of persons with disabilities.

Over the years, the problems of people with disabilities, but especially the rights of people with disabilities, have always been at the center of attention of the United Nations and other international organizations. Different authors and documents proposed different terms / definitions in order to identify and design the specificity of phenomenon of education of children and students with disabilities. The most relevant terms used in relation with the phenomenon of disability are the following: inclusion/social inclusion, integration/social integration, special needs, special education, inclusion culture, education for all and others.

International human rights agreements, covenants, and legislation, stipulate definitions of inclusion that elucidate issues of equity, access, opportunities and rights. Inclusion is based on the concept of social justice, which aims at the right of all children to equal access to all educational opportunities, regardless of disability [45].

Within the educational system, the concept of the rights of people with disabilities has evolved from education with special needs to inclusive education. The effective inclusion of students with disabilities in mainstream schools is a social issue that has continuously concerned education systems around the world for more than four decades. We would like to stress attention on new accent: more often inclusive education is connected to equitable quality education, that involve more sensitive and responsible strategies and actions.

The Salamanca Statement (UNESCO, 1994) highlights the need to provide education for all children in an inclusive school [54]. As a result, several countries have proposed the implementation of inclusive schools.

Consequently, in Israel and particularly in the Arab sector, education policy makers have affirmed a commitment to reducing the numbers of pupils educated in special segregated schools and to moving more of these pupils into the mainstream of education. According to official statistics, the number of students with disabilities in Education System in Israel increased from 164,190 (2017) to 172,796 (in 2022) [34, p.51].

Description of the situation in the research field and identification of the research problems

Taking into consideration that the research covers several aspects, such as: *teachers' attitude, inclusive education, students with disabilities, physical education* and others, different bibliographic sources were analyzed. The issue of stigmatizing attitudes towards children with disabilities has been addressed in several current field studies [29; 60; 62]. We find existing studies in the field mostly focusing on peers' attitude, respectively the attitude of ordinary students without disabilities towards their peer students with disabilities: Florian, V. [28]; Tripp, A., Frence, R. & Sherrill, C. [52] and others. Other studies explored the parents' attitude such: Boukhari, H. [18]; Leyser, Y, Kirk, R. [40].

Several publications have provided evidence that negative attitudes of teachers towards students with disabilities are a major barrier to student learning: Hutzler, Y., Daniel-Shama, E.[33]; Tsakiridou, H., Polyzopoulou, K. [51]; Walker, T. [58]; Weisel, A., Dror, O.[59]; Watson, S. [63]. At the same time, the attitudes of teachers towards inclusion of students with disabilities in the context of PE are less researched.

The vital part of teachers' attitudes to inclusion in the context of different educational domains is addressed by: Avramidis, E, Norwich, B. [14]; de Boer, A. et al. [17]; Daniel-Shama, E., [21];

Savolainen, H. [48]; Sharma, U., et al. [50]; Tsakiridou, H., Polyzopoulou, K. [51], Vaz, Sh. et al. [57]; Walker, Th. [58] etc.

In the Republic of Moldova, Bucun, N., Vrabie, S. [1]; Malcoci, L., Chistruga-Sinchevic, I. [5]; Racu, A. et al [6] explored the subject of teachers' attitudes to inclusion. Callo, T. [2] proposed the paradigm of attitude relevant to our research.

The context of physical education (PE) was analyzed by Block, H.C. et al. [26-39]; Daniel-Shama, E., [22; 23]; Hutzler, Y. [32]; Kudlacek, M. [38]; Mangope, B., et al. [42]; Morely, D. et al. [43]; Rizzo, T. & Vispoel, W. [47]; Tripp, A., Frence, R. & Sherrill, C. [58]; Watson, S. [63] etc.

Some researchers explored the teachers' attitudes towards disable children/ students based on the experience in Israel: Florian, V. [27; 28], Avissar, G. [13]; Feigin, N., Talmor, R. & Erlich, I. (focused on PE teachers) [26]; Gompel, T. [31]; Lifshitz, H., Glaubman, R. & Issawi, R. [41]; Weisel, A., Dror, O. [59]; Daniel-Shama, E. [21-23].

Different aspects of motivation of youth to participate in sports and physical activities have been addressed by Faison-Hodge, J., & Porretta, D. [25]; Boursier, C. & Kahrs, N., [19]; Corbin, C. [20]; Goodwin, D. & Watkinson, E. [30]; Hutzler, Y., et al. [32] (some authors identified prominent stimuli such as: the individual's personal interest in the activity, encouragement received from parents, benefits of the activity, the social pressure amongst a certain age group, the need for companionship, the need for status and social recognition, the need for specialization and achievement, etc. and particularly the conduct of trainer-teacher and his/her approach to student boys/girls).

The re-framing of the subject of physical education with an emphasis on health and a physically active lifestyle rather than more competition has been addressed by Corbin, C. [20] and named as: "new physical education". Antonovsky, A. [61] addresses the integration of a salutogenic paradigm, supporting the theoretical platform of health promotion activities, instead of the traditional medical pathology-based paradigm. Similarly, Lahad, M. et al. [39] in its multi-dimensional model BASIC PH, emphasizes the need to address coping and the unharmed resilience of children with disabilities.

It was important for the exchange of information and experience in this research to get acquainted with the work of Moldovan researchers dedicated to the topic of inclusive education: Bucun, N., Vrabie, S. [1], Racu, A. et al. [6], Cara, A. [3], Balan, V., Bortă, L., Botnari, V., Bulat, G., Eftodi, A., Gînu, D., Lisnic, E., Petrov, E., Priţcan, V., Şevciuc, M., Velişco, N. [4]; Rusnac, V. [7] and others.

The research was based on the epistemological values of normative documents such as: *the Convention on the Rights of the Child, the Convention on the Rights of Persons with Disabilities, the Salamanca Statement, the Compulsory Education Law of Israel, Law on social inclusion of persons with disabilities and the Education Code of the Republic of Moldova, etc.*

At the same time, the preliminary analysis in the field of the current research has attested several contradictions, such as the following:

- Despite the adoption of international standards and research related to the inclusion of people with disabilities, including in the educational environment, the subject remains within the limits of scientific discussions between medical and social approaches, in particular, regarding the inclusion of students with disabilities in physical education.
- Although the important issue of inclusion has become imperative in mainstream schools, challenging the education system to solve it, children with disabilities continue to face obstacles that are directly related to their disability, but no less to the stigmatizing attitudes of their new environment, including teachers, who should take responsibility for their integration.
- Barriers to participation in physical activity or the exclusion of children from it are the practical result of physical education teachers' lack of adaptation resources and pedagogical strategies in addressing the issue of inclusion, although they may have the awareness and will to do so.
- Considering the dynamics of social life and new educational policies to include children with disabilities in the regular system, it has become urgent to implement a social-integrative approach that benefits both regular students and students with disabilities.

We note the importance of developing a positive attitude of PE teachers towards children with

disabilities. Being aware of the students with disabilities rights to be an integral part of school and be included as far as possible in different school activities, careful attention should be devoted to the required strategic steps since only a careful professional implementation of the inclusion policy, can ensure its success [4; 9; 24; 36].

So, the premises and the contradictions which have been mentioned above served as the basis for the formulation of **the research problem**: how to improve the physical education teachers' attitudes regarding the inclusion of students with disabilities into physical education activities, to make their education more efficient, given that PE in the Arab sector is non-inclusive?

The object of research: The process of developing positive attitudes of physical education teachers towards inclusion of students with disabilities.

The Goal of the research consists of elaboration, implementation and validation of the Pedagogical Model for the development of the PE teachers' positive attitudes towards inclusion of students with disabilities in physical education activities to make their education more efficient.

Research hypothesis: the process of developing positive attitudes of physical education (PE) teachers towards students with disabilities will be more efficient if we: establish the epistemological and methodological context of PE teacher training, based on correlations between the attitudes and the variables: participation in an academic course, experience in integrating students with disabilities, gender, years of work experience (in teaching); explore the predictive factors of PE teachers' attitudes towards inclusion of students with disabilities; adapt PE curriculum and activities serving specific needs of students with disabilities; motivate students with disabilities to participate in physical education lessons together with non-disabled students; elaboration, implementation and validation of the Pedagogical Model for the development of the physical education teachers' positive attitudes towards the inclusion of students with disabilities.

To achieve the goal and hypothesis of the research, the following **objectives were proposed**:

1. To explore the concept and dimensions of teachers' attitudes to inclusion.
2. To analyze the evolution and elucidate the concepts of inclusion in education system and connections between inclusion and physical education.
3. To elaborate a theoretical and praxiological framework for including students with disabilities in PE lessons together with non-disabled students.
4. To examine the complexity of correlations between the physical education teachers' attitudes and variables of: participation in an academic course, experience in integrating students with disabilities, gender, years of work experience (in teaching).
5. To validate the Pedagogical Model for the development of the Physical Education Teachers' positive attitudes towards inclusion of students with disabilities in the physical education activities/lessons to make their education more efficient.

Synthesis of the research methodology and justification of the research methods

The current research is based on the analysis of several concepts, theories, documents in the field of pedagogy, psychology, special pedagogy, sociology dedicated to inclusion, attitudes, physical education of students with disabilities.

As specific *epistemological benchmarks* served: the concepts of inclusive education, the rights of persons with disabilities (based on: Convention on the Rights of Persons with Disabilities [56]; Convention on the Rights of the Child [55]; Salamanca Statement and Framework for Action on Special Needs Education [54]); physical education adaptation: Watson, S. [63], Reid, G. [46]; ideas on attitudes' developing: Allport, G. [11], Block, M. [16] etc., approaches regarding PE teachers' attitudes to inclusion students with disabilities proposed by Hutzler, Y. [32; 33]; Obrusnikova, I. [44]; Morley, D. et al.[43]; Mangope, B. et al. [42]; the concept of Corbin, C."new physical education"[20], the Antonovsky' A. salutogenic paradigm [61], Kolb's D. theory of experiential learning [37], Ajzen, I.' theory of Planned Behavior [10] etc.

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

The scientific originality and novelty of the research: based on theoretical-experimental research process the concepts of inclusion, inclusive school environment, positive attitudes of PE teachers were updated; contributed to changing the traditional paradigm that sport is an unimportant subject/activity for students with disabilities, to address it as a key element of inclusion in physical education lessons; the indicators for evaluating the attitudes of PE teachers towards the inclusion of disabled students in physical education activities were established; the Pedagogical Model for the development of PE teachers' positive attitudes towards the inclusion of students with disabilities in PE activities, based on the Formative program "Sport is for all" was validated.

The main scientific results obtained in the research consist in the validation of the theoretical and methodological components of the Pedagogical Model for the development of the Physical Education Teachers' positive attitudes towards inclusion of students with disabilities in PE activities/lessons in the schools in Arab sector of Israel, the implementation of which contributed to decreasing the teachers stereotypes, changing the attitude towards students with disabilities: from approaching them as a problem to approaching them as an opportunity; ensuring the decrease of the negative impact to disabled students, enhancing their participation in PE together with nondisabled students, and creating an inclusive environment.

The theoretical significance of the research: the contribution to the development of the concepts and theories of inclusion in relation to PE; identification of factors and indicators of inclusive education in relation with PE; contributions to the theory of education by exploring the concept of inclusive PE based on social, pedagogical and psychological foundations; analysis of various PE teacher's attitudes programs, systems and alternative facilities for disabled students to reduce the risk of its rejection; the complexity of correlations between the attitudes of PE teachers and between the variables of: participation in an academic course, experience in inclusion of disabled students, gender, years of work experience.

The praxiological value of the research: the activities from the Pedagogical Model for the development the PE teachers' positive attitudes can be applied in developing plans for increasing the inclusion of students with disabilities in all the PE classes at all the schools of Israel, in partnership with school, community and family; the Formative program "Sport is for everyone" can help improve teacher's performance on disabled students inclusion together with non-disabled colleagues in the PE activities, and thus can reduce rejection rate among students with disabilities.

The implementation of the scientific results: through practical activities with teachers and students from 120 elementary schools in Northern Israel.

Approval of scientific results: theoretical and practical results of the research were discussed and approved within the Department of Education Sciences, Moldova State University; validated through publication in specialized scientific journals, communications in scientific forums (Scientific conferences: "The initial and continuous training of psychologists in the field of child protection against violence", 2018, UPSC, Chisinau; "The sixth international conference on adult education. Education for peace and sustainable development", 2023, USM, Chisinau) etc.

Publications in the field: the research results were reflected in 9 scientific articles.

Volume and structure of the thesis: 160 pages basic text, including annotations, three chapters, conclusions and recommendations, 21 figures, 20 tables, bibliography (208 titles), 6 appendices.

Key-words: positive attitudes, physical education, inclusion, students with disabilities, integration, inclusive education, motivations, social stereotype, children with special needs.

THESIS CONTENT

The actuality, importance and relevance of the subject of the research, the described research field and research topic, based on the identification of the contradictions, its premises and its effects on the education system and the physical education in the Arab society are all presented in **the Introduction**. It describes the goal and objectives of the research, the experimental dimensions of the positive attitudes of the physical education teachers, the scientific approval of the research results.

The **first Chapter Theoretical landmarks regarding attitudes in relation with social integration and inclusion in education** includes the conceptual approaches of teachers' attitudes towards inclusion (structured per dimensions), inclusion in the education, different approaches of inclusion in the education.

The epistemology of the *concept of teachers' attitudes to inclusion* was based on ideas and theories in the field of education, psychology and sociology that demonstrate its significant social impact: teachers' attitudes to inclusion in the context of different educational domains is addressed by: Avramidis, E., Norwich, B. [14]; de Boer, A. et al. [17]; Savolainen, H., et al. [48]; Sharma, U., et al. [50]; Tsakiridou, H., Polyzopoulou, K. [51], Vaz, Sh. et al. [57]; Walker, Th. [58]; Bucun, N., Vrabie, S. [1]; Balan, V., et al. [5]; Racu, A. et al. [6]; Timuş, A. [8] etc.

Some researchers explored the teachers' attitudes towards disable children/ students based on the experience in Israel: Florian, V. [27; 28], Avissar, G. [13]; Feigin, N., Talmor, R. & Erlich, I. (focused on PE teachers) [26]; Gompel, T. [31]; Lifshitz, H., Glaubman, R. & Issawi, R. [41]; Weisel, A., Dror, O. [59]; Daniel-Shama, E. [21-23].

An attitude can be as a positive or negative evaluation of people, objects, events, activities, and ideas. Researchers focused attention on three components: cognitive, emotional, and behavioral, when the ratio between the three components can vary in degrees and intensities [40].

The attitude reflects the way in which the previous experience is accumulated, preserved and organized, when the teacher approaches a new situation. Attitude appears as a link between his dominant internal psychological state and the multitude of situations to which he relates in the context of his social and professional life (adapted after Callo [2]). Specifically, this approach has served as a benchmark in exploring the attitude of physical education teachers towards students with disabilities. Having the general attitude towards students as people able to do sports / physical education, complemented by stereotypes/ stigmas towards people with disabilities, they often find it difficult to overcome working with children with disabilities. This situation hinders the efficiency of the educational process.

Studies show the differences in teachers' attitude towards inclusion depending on experience working with students with disabilities [3; 42]; self-perceptions of competence, educational preparation [apud 42]. Some authors have examined the relationship between different types of attitudes and variables such as teacher age (Mdikana, Ntshagangase, & Mayekiso, 2007), gender (Sharma & Desai, 2002), teaching experience (Marston & Leslie, 1983), educational preparation (Mangope, Koyabe, & Mukhopadhyay, 2012), perceived teaching competence (Mukhopadhyay, Molosiwa, & Moswela, 2009) [apud 42], and type and severity of student's disability (Rizzo & Vispoel, [47]).

Several researchers mentioned that if teachers have more knowledge about inclusive education and how their learning needs can be met, their attitudes for inclusion altered from negative to positive [36; 42].

We agree with de Boer [17], that attitudes are influenced by information and knowledge about disability and by teachers' skills in working with children with disabilities in mainstream schools. The specially trained teacher tends to have a more favorable attitude towards the inclusion of students with special needs than their non-professionally qualified teachers.

Based on several research, it has been outlined that it is more efficient to form positive attitudes in teachers at the initial training stage. At the same time, taking into consideration the social transformation and educational challenges and trends, professional ongoing education, dedicated to teaching PE to students with special needs, is needed.

We conclude that the attitude of the teacher can be considered as one of the significant variables in the education of students with disabilities. Correlating the definitions expressed by various authors, we contributed to the explanation of the term of teacher's attitude in the context of inclusive education, proposing an exhaustive definition: *the positive attitude is larger than inclusive attitude towards students with disability, including friendly approach and respect, support/ encourage, empathy, oriented to individual needs and preferences of the disable students, without any limitations.*

To understand the context of the teachers' attitudes towards the students with disabilities, the analysis of the development of social integration and inclusion in the world (definitions, evolution of

terms, legal framework); the development from special education to social integration and inclusion is provided. Based on this, the new accent was highlighted: *inclusive education is more often connected to equitable quality education*, that involves more sensitive and responsible strategies and actions [29].

Different authors and documents proposed different terms/ definitions to identify and design the specificity of phenomenon of education of children and students with disabilities. In this regard, the *definitions on inclusive education and inclusive culture were reinforced*. In relation with education of students with disabilities, we consider *inclusive culture of school as the school's culture of tolerance, acceptance and inclusive relationships between students, teachers, parents*.

To address the barriers of human rights of persons with disabilities, a social exclusion approach to marginalization of disabled person was assessed. The indicators of social exclusion and their associated problems interact and result in a cumulative effect. In the frame of comprehensive analysis of situation in MENA region, several *Indicators of marginalization for people with disabilities* were specified: Physical activity, Poverty, Education, Minority statute, Cultural norms, Gender.

We noted that the change in the philosophy and vision regarding the different and special requirements of individuals has led to significant changes in educational policy as well. Under the pressure of the new approaches, terms like handicapped/uneducable and correctional education were replaced by the term child with special educational needs. These changes are based on the transition from the medical to the social approach, based on the special needs of the individual.

In this context, the exhaustive definition of inclusive education was proposed. From our point of view, *from a broad perspective the inclusive education represents a comprehensive socio-educational process to ensure "de facto" the disable students' rights to education, involving students, parents and community with a major goal: future social integration of disable persons and creation of an inclusive environment at community level and whole society. From a narrow perspective the inclusive education is focused on the learning environment: taking into consideration their diversity, their performance must be related to their different capacities, content must be linked to life, the educational strategies must be differentiated, with final goal to increase students' learning motivation and progress and creation of school inclusive culture*.

Based on the carried-out analysis, the connections between inclusion and physical education were explored. Researchers and psychologists in sports found the connection between the goals, beliefs, predictions and success and participation in physical education [29; 26; 22].

Physical Education is an integral part of the curriculum and education in the school because physical activity is an important factor in child development, not only in physical but also the psychological and social aspects [38]. However, a significant decrease in the participation rates of adolescents in PE classes was found. At the same time, PE of students with disabilities represents one of the big challenges for the students and for the educational system too [60].

From a conceptual perspective, we consider that *inclusive physical education is based on social, pedagogical and psychological fundamentals* [23].

Being aware of the students with disabilities rights to be an integral part of school and be included as far as possible in various school activities, careful attention should be devoted to the required strategic steps since only a cautious professional implementation of the inclusion policy, can ensure its wishful success [4; 6; 7; 12; 16; 19]. Inclusive education is often associated with students with disabilities or "special educational needs." In fact, according to the concept of "school for all", inclusion refers to the school education of all children and young people.

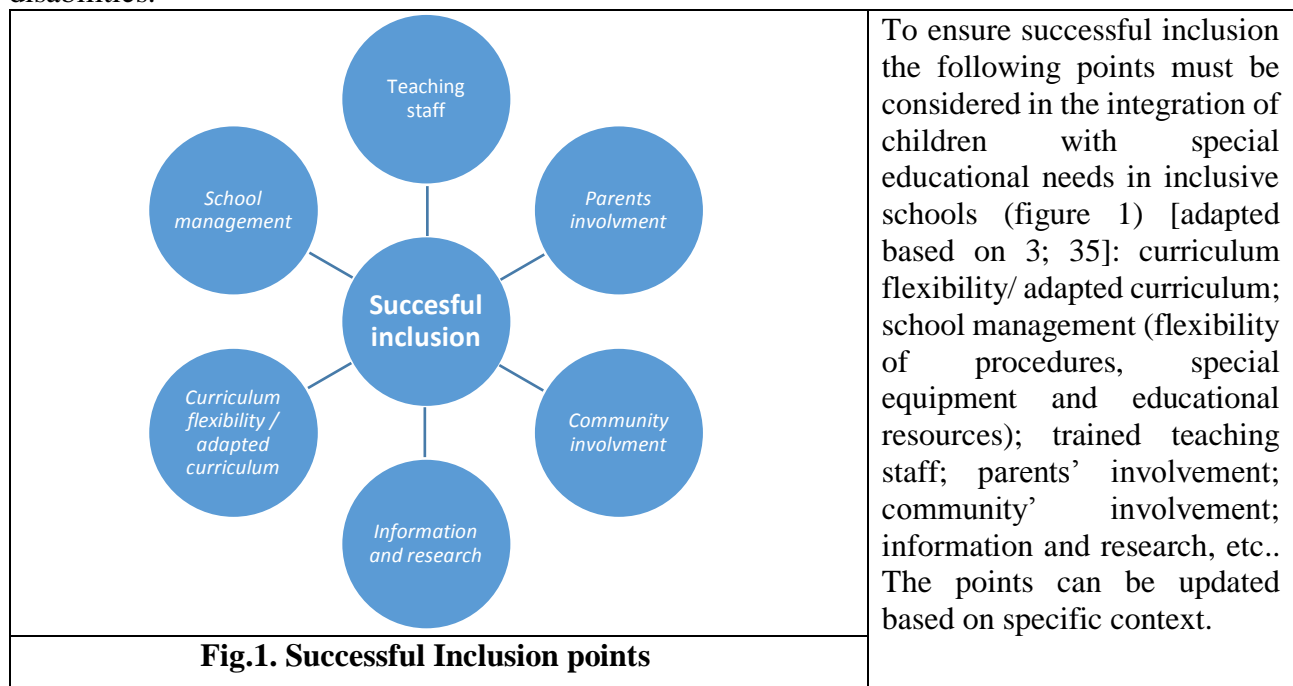
Considering the specifics of physical education, in this paper we used the term 'students with disability', which correlates with the term 'special education needs' (SEN). In the context of present research, we adhere to the definition proposed by OECD "Students with special needs are those for whom a special learning need has been formally identified because they are mentally, physically, or emotionally disadvantaged" [49, p.22].

The analysis of international and national documents (Israel and Moldova) confirmed the existence of comprehensive legal framework on protection of human rights of children with disabilities. At the same time, creating the legal framework is only the first important step, that should

be enforced by implementation mechanism and relevant resources. Mentioning the existence of both terms 'students with disabilities' and 'SEN' in the educational area of Israel and Moldova, we note that in Israel the term 'disabilities' is used more frequently, while in Moldova - SEN. Despite various challenges, Israel accumulated some experience on the inclusion of students with disabilities into PE activities, that can be useful for education system in Republic of Moldova.

Conclusions: The synthesis of the analyzed ideas confirms our conclusion that the teachers' attitude can be considered as one of the significant variables in the education of students with disabilities. The positive attitude of teachers can motivate disabled students to actively participate in PE activities. The process of inclusion of students with disabilities in PE together with non-disabled colleagues is considered a particularly important scientific problem, being in direct relation with the change of the teacher's attitude. Also, the importance to ensure efficient inclusive education of disable students should be mentioned. The focus should be not only on protection but also on ensuring the attainment, self-realization of disable students.

The **Chapter 2 *The methodological framework of developing physical education teachers' positive attitudes towards inclusion of students with disabilities*** focuses, in its first part, on the concept of developing PE teachers' positive attitudes towards the inclusion of students with disabilities.



Based on international standards and literature review, we deduced the importance of educational strategies focused on improving the PE teachers' attitudes regarding the inclusion of students with disabilities into PE lessons/ sport activities, taking into account the specific needs of girls and boys, but also the sociocultural and family context etc.

In the context mentioned above, we designed the Concept of developing physical education teachers' positive attitudes towards the inclusion of students with disabilities that contains the following components: analysis of physical education sector in Israel in relation with inclusion; Adaptation of physical education (APE) for Students with Disabilities; overview of Socio-cultural determinants of teachers' attitudes towards the disabled students.

In Israel, physical education is taught from first grade through 12th grade and is considered a core subject in the education system, aiming to: offer students the opportunity to acquire motor skills and experience in various sports, increase students' physical activity and promote a healthy lifestyle along with education for moral-social behavior. In addition, there is a meaning to the enjoyment and challenges of physical activity as part of the school curriculum. This teaching copes with physical education for its diverse purposes in educational institutions during school hours, in school sports clubs, and in other initiatives and programs destined for all ages.

In the last decade, The Israel National Program for Active & Healthy Living promotes physical activity in Israel. At the same time, studies show increasing dropout of physical education classes among the youth. The recent Israel Physical Activity Report Card for Children and Adolescents, 2022 [65], highly recommended to develop a response to promote physical activity among children with special needs, to develop programs for physical activity among children and youth, focusing on children at risk and those with special needs.

According to official statistics, in 2020, people with disabilities accounted for 20% of the population in Israel (more than 1.5 million people); of those, about 326,000 children (accounted for 11% of all children in Israel) [64]. The findings indicate a considerable gap between the current and the desirable situations regarding the hours of physical activity per child, especially in institutions for children with physical disability (83%).

People with disabilities work less, earn less, are less educated and lonelier than people with no disabilities and this fact stands out in harm to their quality of life, as children of their age belong to the education system – after all, the Knesset approved the change of the special education law (2018), according to which the special education services should be focused on the promotion and development of the learning and skills of the student with disabilities and his physical, intellectual, mental, social, and behavioral functioning.

In this context, the role of PE teachers is to increase their capacities to work with students with disabilities. The analysis of the physical education teacher training process shows significant gaps in the programme regarding the inclusion of students with special needs. In general, basic training programme, beyond recognizing the importance of including students with disabilities, must be equipped with practical tools to implement inclusive policy.

Therefore, we can conclude that the innovation of our research can contribute to supporting the subject of inclusion significantly, adding integration tools and skills from the beginning of the training of physical education teachers, so that they can gain professional self-confidence and be competent to integrate with success for students with disabilities.

In this regard, we proposed to focus special attention on *Physical Education Adaptations for Students with Disabilities* in the professional development of PE teachers. Thus, to realize the right to education, the PE teacher must ensure that disabled students receive sufficient training based on the general education curriculum together with their typical colleagues. Accordingly, PE teachers must adapt instructional strategies to students' needs, including on the basis of individual education plans.

Adaptation includes adjusting, modifying and changing the activity (in time, dynamics, format, or providing more rest time) in accordance with the demands of students with special needs. Adaptations may also include adjusting, modifying several equipment: larger balls, bats, assists, using different body parts etc. Thus, PE teacher should think in terms of activity, time, equipment, boundaries, distance, type of assistance, resources, cooperation with specialized support staff etc.

Adaptations may include student expectations based on their needs and abilities. Respectively, the demand for performance and involvement must be adapted to the student's ability to participate. Physical Education Adaptations (APE) represent a key component of Inclusive Physical Education and Physical Activity, which involves:

- inclusion of the student with disabilities in regular physical education classes;
- adjusting teaching strategies, equipment, environments, and assessments to meet the needs of all students;
- supporting students with disabilities who want to participate in other physical activities before, during and after school;
- encouraging students with disabilities to have the same roles and experiences as their peers without disabilities during physical education and other physical activities (adapted from [62]).

The major importance in this sense is that the students with disabilities benefits from physical education training by experiencing success. Furthermore, learning physical activities will prepare the foundation for physical activity throughout life.

The central term used within APA terminology is adaptation, referring to assessing and managing variables (related to the tasks, persons involved, and environment) to meet unique needs

and achieve desired outcomes. The aim of adaptation in APA is “to enhance physical activity goal achievement of individuals of all ages with movement limitations and/ or social restrictions”. The Physical Education Adaptations for Students with Disabilities served as basis of the Formative program “Sport is for everyone”.

Considering the mentioned above entry points, we identified the *socio-cultural determinants of teachers’ attitudes towards the disabled students*.

In this regard, we reiterated that the factors which determine the formation of positive or negative attitudes towards disabled people and, implicitly, towards disabled children, can be from at least three categories: factors related to the person expressing the opinion, the type of disability and the sociocultural context, at a given time [8, p. 246]. On the other hand, several authors reviewed factors that can influence the formation of attitudes towards disabled people, among which we mention: age, gender, nationality, marital status, educational level, socio-economic level, residence in urban or rural environment, experience with people with disabilities, etc. In the frame of current research, several factors are explored.

Based on analysis of different experiences, we conclude that strategies and programmes must develop from the local/state/national contexts in which people with disabilities live, work, and go to school. It must be noted that strategies to address marginalization and social exclusion are multidimensional, relational, and context-specific processes.

We conclude that all teachers should be trained/ prepared to act on the belief that all students, including students with disabilities, belong in general education classrooms. We, also, note the importance to help/ to conduct teachers to understand their role in education and inclusive education, that inclusion of disabled students in the classroom is an opportunity, not a problem.

We introduced models guiding attitudes and behaviors toward persons with disability: the three types of orientations are very significant for the planning of lessons. This is very important to PE teacher when he/ she plans the lesson. It also so important to understand the all-encompassing concept of the attitude change. To explore better the mentioned above context, the current research is focused gradually on the specific factors connected to the implications of teachers having to cope with disability in a regular demanding setting, and the required methodology and finalities of developing adequate coping strategies.

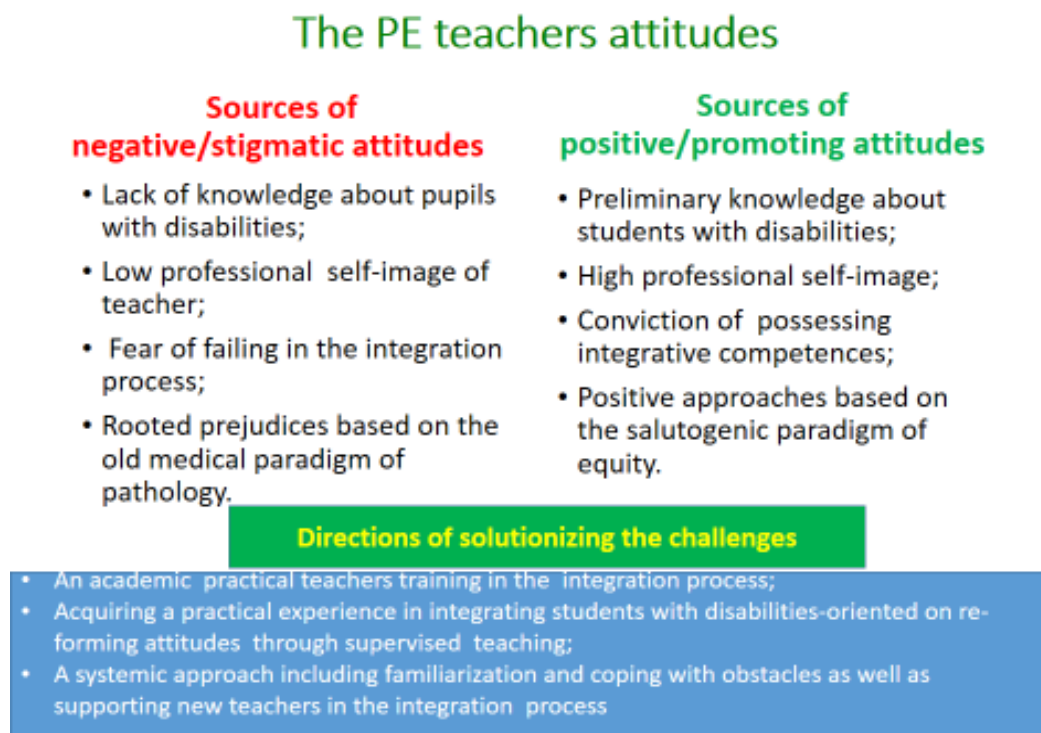


Fig.2. The connection between PE teachers’ attitudes and psycho-pedagogical strategies

The Figure 2., designed by us, reflects the connection between PE teachers' attitudes and psycho-pedagogical strategies, based on identification of sources of negative/ stigmatic attitudes and sources of positive/promoting (inclusive) attitudes. As sources of stigmatic attitudes, we note: lack of knowledge about pupils with disabilities; low professional self-image of teacher; fear of failing in the integration process; rooted prejudices based on the old medical paradigm of pathology. To transform negative/stigmatic attitudes into positive/ promoting (inclusive) attitudes, the following psycho-pedagogical strategies were proposed: organization of academic practical teachers training in the integration process; acquiring a practical experience in integrating disabled students – oriented on reforming attitudes through supervised teaching; a systemic approach including familiarization and coping with obstacles as well as supporting new teachers in the integration process.

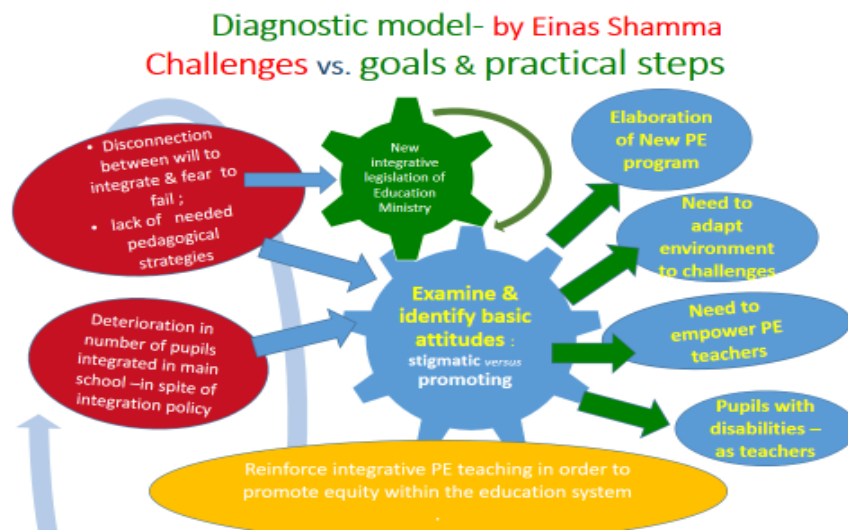


Fig.3 Diagnostic Model for Changing Stigmatized Attitudes: Challenges vs. Goals and Practical Steps

To decide on specific steps to modify stigmatized attitudes of learners, this diagnostic model was drawn up (figure 3), aiming at identifying the main type of attitudes, which would be its psycho-psychological aspects (Lahad, et al.) [39], trying to define the directions of Pedagogical solution of the problematic situation that hinders the integration of students with disabilities. The following challenges were identified: disconnection between the will to integrate & fear to fail; lack of needed pedagogical strategies; deterioration in number of pupils integrated in main school.

Diagnosing the present situation and the new challenges related to the vocational needs of the PE teacher who is required to de facto face the inclusion of disabled students is reflected in figure 4.

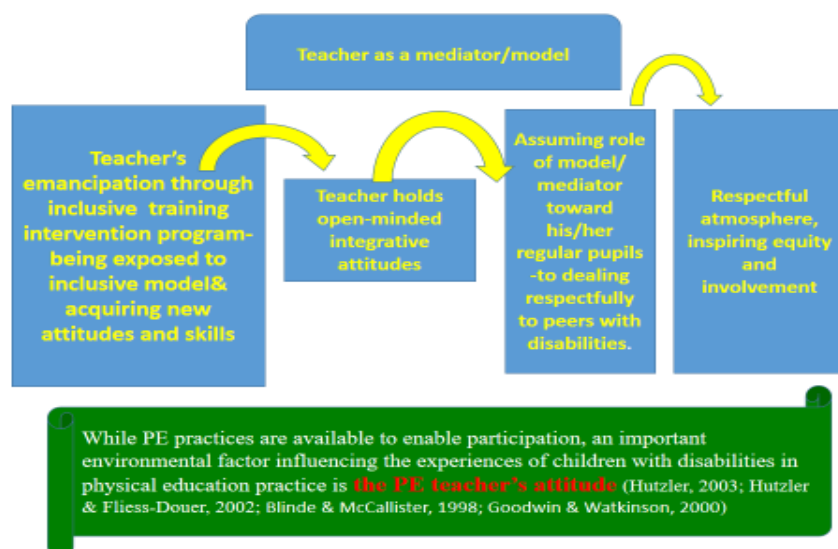


Fig.4. Teacher's new promoting role as a mediator/model in the integrative process of students with disabilities

Moreover, to ensure/ forming the positive attitude of PE teachers, the teacher's new promoting role as a mediator/ model in the integrative process of students with disabilities was proposed. Thus, the teacher as a mediator acquiring new attitudes and skills, holds open-minded integrative attitudes; dealing respectfully to peers/students with disabilities; creates a respectful atmosphere, inspiring equity and involvement.

The key paradigms behind the inclusion implementation within regular settings had been presented starting from the leading humanistic approach and addressing the social behavioral and the PE attitudes. Our reference frame is based on existing research, due to the stigmatic attitudes of their new surroundings, including teachers, which are supposed to assume the responsibility to integrate them [41]. Therefore, it was hypothesized that the more advanced the stage in the teacher preparation process, and the more positive attitudes will be expected. This variable was considered a control variable for the attitudes (see figure 5).

All mentioned above contribute to conceptualization of the **Pedagogical Model for the development of the Physical Education Teachers' positive attitudes towards the inclusion of students with disabilities** (figure 6).

This scientific construct is linked to the 2030 Agenda for Sustainable Development, which includes quality education, encouraging the participation and recognition of people with disabilities as active members of the society: who must not face any discrimination or be ignored or left behind.

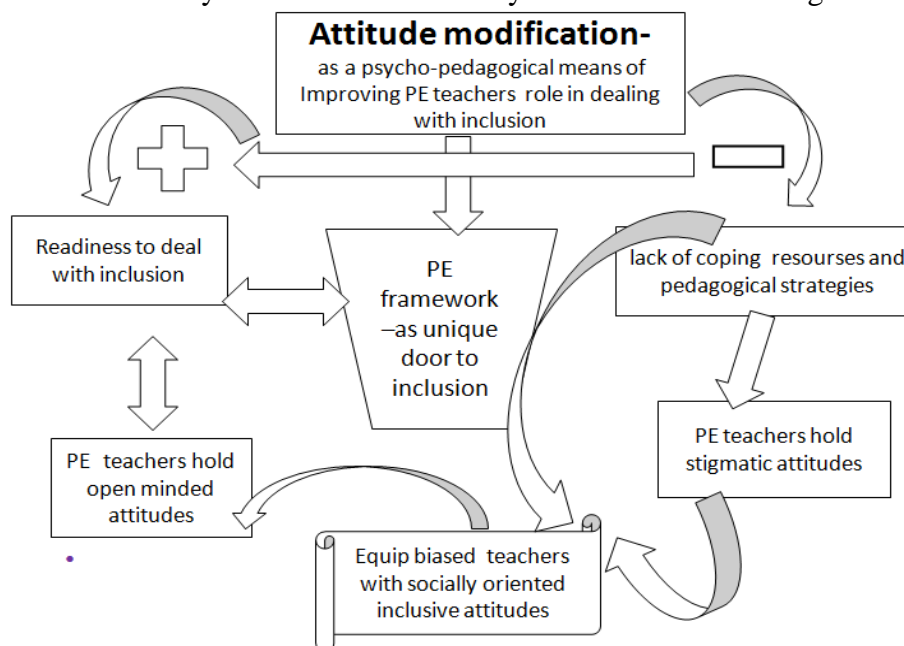
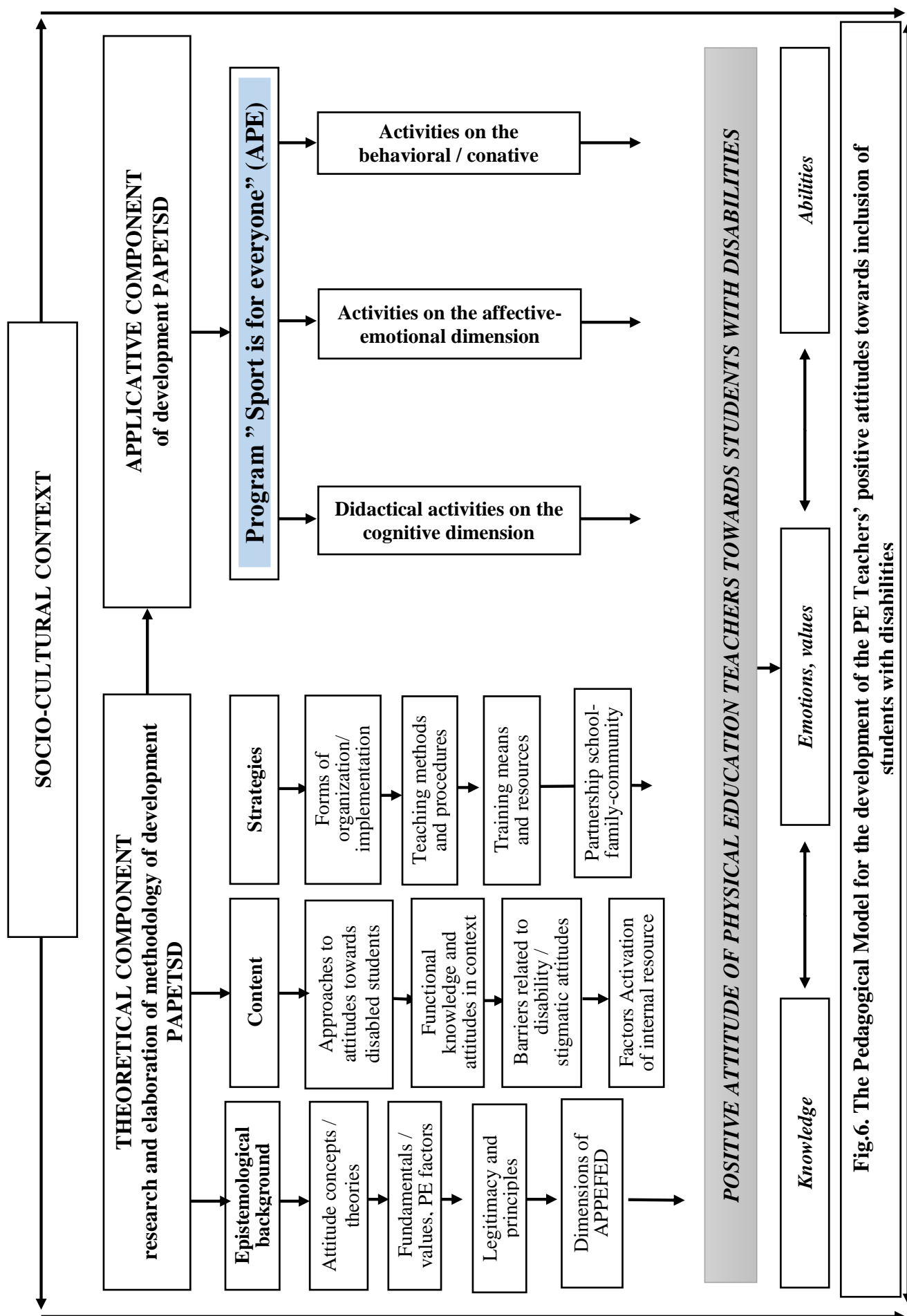


Fig.5. Attitude Modification

The Pedagogical Model for the development of the PE Teachers' positive attitudes towards inclusion of students with disability is a theoretical and methodological construct, which includes in its structure a system of interactional values, which are part of the general paradigm of better training students prepared for life, in particular, the inclusion of students with disabilities in sports/ physical education with students without disabilities.

The output of the Pedagogical Model is to create the framework to improve the inclusion of disabled students together with those without disabilities in PE lessons in schools in the Arab sector of Israel, ensuring the reduction of negative impact on them, increase their inclusion for personal and social development and create an inclusive social environment.

The foundation of the conceptual framework of the Pedagogical Model for the development of the PE Teachers' positive attitudes towards inclusion of students with disability focused on exploring several theories and concepts: the theory of planned behavior (TPB) (Ajzen I. [10]), the theory of social learning (Bandura A. [15]), the theory of experiential learning (Kolb D.[37]), the concept of attitude (Allport G. [11], Block M. et al.[16], Callo T. [2] etc.), the fundamentals of physical education and the values of sport, set out in Chapter 1, para 1.3.



The model is based on the classic legitimacy of education. The functionality of the Model focuses on the principles of inclusive education, elaborated by UNESCO [53]: Inclusion and quality are mutual; Access and quality are linked and mutually reinforcing; Quality and equity are essential to ensure inclusive education; but also on the principles, proposed by us:

- *human rights-based approach*: treating all people as good people, despite their disabilities
- *non-categorical approach*: covering all types of disabilities should be developed as a common core, before further specializing in one or more disability-specific areas
- *complementarity and mobility*: specialized training in the field of special needs education leading to additional qualifications should normally be integrated or preceded by training and experience as a regular education teacher
- *the principle of (co) creation* of the teacher and the student in the educational process, the interconnected, coordinated activity of the teacher and the student, based on the needs of the student
- *Gender equality approach*: equal treatment of girls and boys, prevention of sexual harassment and sexual abuse, etc.

The components of the model are mutually conditioned and constitute a continuous cycle which, through the use of different methods, forms, means of learning, results in the transformation of the attitude of physical education teachers. The activity of learning (development) with reference to inclusion must start from a volume-support of knowledge, which selected and correlated with each other, will substantiate further training at a higher level, by operationalizing knowledge and training/developing skills, models specific behavior and attitudes, thus ensuring the development of the positive attitude of physical education teachers towards students with disabilities and their inclusion together with children without disabilities in sports / physical education activities.

Next, based on the general foundation of the Pedagogical Model for the development of the PE Teachers' positive attitudes towards inclusion of students with disability, we established its components and basic provisions in interconnection and presented them in a schematic form (figure 6). The pedagogical model includes two components: the theoretical component and the application component, which includes the elaboration of the methodology for developing the positive attitudes of physical education teachers towards inclusion of students with disabilities and the Formative program "Sport is for everyone" and assessment methodology of the obtained results. Finality: PAPETSD - Positive Attitude of Physical Education Teachers towards Students with Disabilities

The model includes several inter-dependent components starting with the identification of the conceptual measures which lie behind the stigmatic traditional attitudes of PE teachers who may often be compelled to cope for the first time with the inclusion of students with disabilities in their regular classes by the new inclusive educational system policy, moving to the urgent aims of creating a change enabling platform by elaborating an attitudinal plan for increasing the participation of students with disabilities in PE lessons. The model specifies the exact tools that were identified as the most adequate ones as attitudinal change providers.

Conclusions: Our "Pedagogical Model for the development of the PE Teachers' positive attitudes towards inclusion of students with disability", offers an operative approach that can enhance a meaningful change in the initially stigmatic attitudes of PE teachers toward the inclusion of disabled students. The above understandings led us to the crucial relevance of creating educational opportunities to expand access to education and to recognize some indicators that are important for PE teachers who have to face the challenges of inclusion during classes.

Chapter 3 *The experimental framework to developing the physical education teachers' positive attitudes towards inclusion of students with disabilities* reflects all stages of pedagogical experiment. The diagnosis of physical education teachers' attitudes towards the inclusion of students with disabilities in physical education activities is presented in the first part.

The purpose of the research for the experimental finding is to analyze and determine the level of manifestation of physical education teachers' attitudes towards the inclusion of students with disabilities and to find effective practices for their inclusion in physical education activities.

In line with the purpose of the research, we launched the following objectives:

1. To identify the PE teachers' attitude to the inclusion of students with disabilities in PE lessons.
2. To examine the complexity of correlations between the attitudes of physical education teachers and between the variables of: participation in an academic course, experience in integrating students with disabilities, gender, years of work experience (in teaching).
3. To validate a Pedagogical Model for the development of the PE teachers' positive attitudes for the inclusion of disabled students together with nondisabled students to make their education more efficient, based on the Formative program "Sport is for everyone".
4. To determine the impact of the mentioned Model on the motivation of students with disabilities to participate in the physical education lessons/activities/ and on the attitudes of the teachers involved in the process.

At the initial constative experimental stage, 160 physical education teachers (68 women and 92 men) from various schools in the Nazareth, Cana, Reina, Eilut, Ein-Mahel, Haifa, and Mashhad regions participated in the questionnaires. After that, 90 teachers of physical education were randomly selected for a pedagogical formative experiment based on negative attitudes toward students with disabilities and divided by gender and experience in working with such children.

Thus, to generate a picture of the various attitudes of PE teachers towards children with disabilities within the frame of physical education classes in various schools of the Israeli Arab sector, and to create a clearer idea about improving effective methodology programs for physical education teachers' attitude - toward the inclusion, we proposed the working hypotheses: there will be a difference in attitudes towards students with disabilities between teachers: those who participated in an academic course designed to increase self-awareness of one's discrimination tendency and teachers who did not participate in such a course; those who have previous experience of inclusion of students with disabilities in PE and the ones who do not; between teachers women and men; different years in teaching.

Thus, the first step was to determine the factors/reasons that cause students to leave the lesson (figure 7).

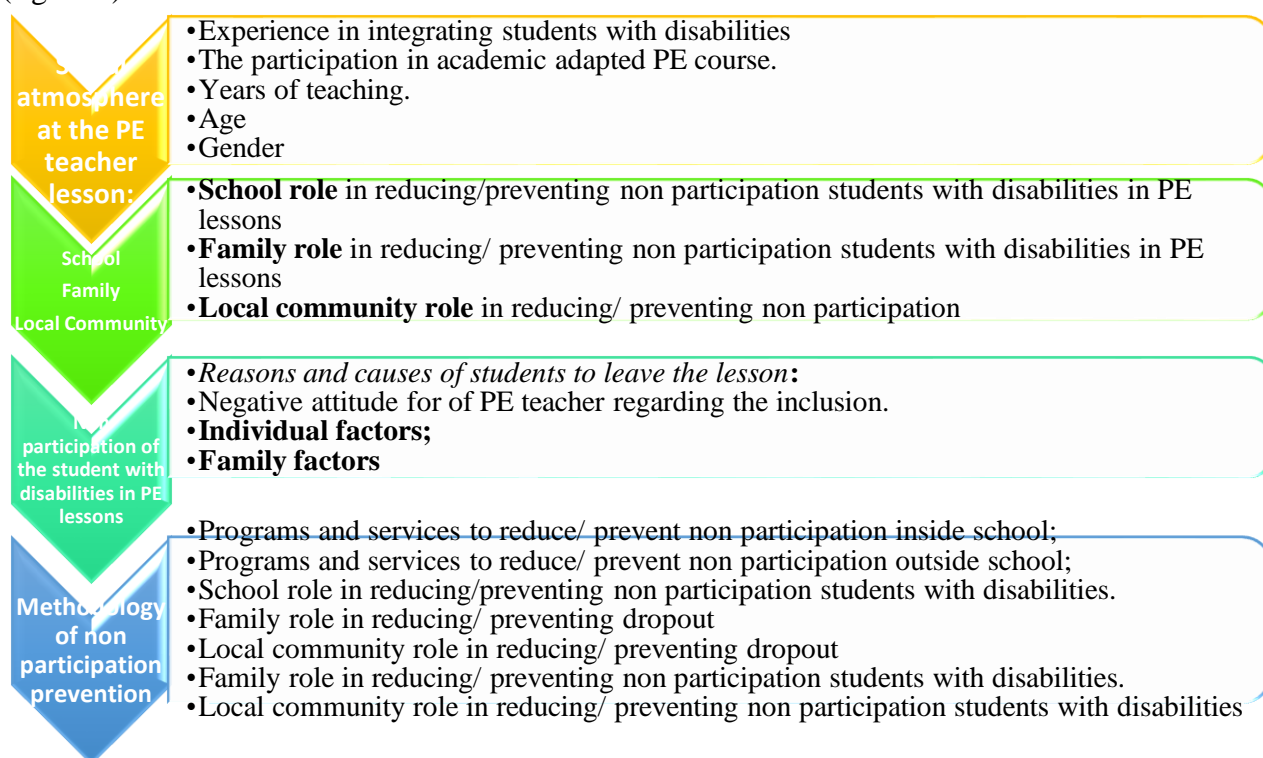


Fig.7. Factors/ reasons that cause students to leave the lesson

To investigate teachers attitudes towards students with disabilities we used The Attitude Questionnaire (ATIPE) and Demographic Questions scale.

The decision to use the classical social tool of surveys delivery, had been taken since it can facilitate the process of obstacles identification in integrating different populations-in our case the inclusion of children with disabilities in regular frames. The approach had been found suitable to defining subjects' attitudes and, as stipulated in our context, is a common denominator of all human beliefs to others or to social phenomena or as an emotionally charged opinion which serves as the basis for a series of behaviors toward a particular social phenomenon. This definition reflects the three main characteristics (consciousness, emotional, and behavioral) of the attitude.

The teachers' positions in school are largely a reflection of public opinion, so it is interesting to know the processes taking place in this field over recent years in the country. In our research it was used for gathering information on the main aspect of this study - the identification of factors and indicators related to teachers' attitudes related to the issue of children with disabilities inclusion in the PE. The gathered data was quantifiable and measurable, and thus it gave us an evaluable picture of the studied situation. This method helped us to predict teachers' behavior in various challenging situations and examine the correlations between the determined variables and hypotheses.

- Dependent variables: attitudes towards children with disabilities in PE lessons; The reasons and causes of students to leave the lesson were categorized: negative attitude of the physical education teacher regarding the inclusion.
- Independent variables: social atmosphere at the PE teacher's lesson, experience in integrating students with disabilities, the participation in an academic course, years of teaching, gender. The results can be found in Tables 1, 2 and Figure 8.

Table 1. Means and standard deviations (SD) of questionnaire scores across gender

Variables	Mean (SD)		t	p	Confidence interval	
	Males	Females			Upper	Lower
<i>ATT threat</i>	2.00 (1.05)	1.36 (0.47)	-4.62	<.001	0.36	0.9
<i>ATT Challenge</i>	2.77 (1.01)	3.22 (0.71)	-3.1	<.002	-0.72	-0.16

Table 2. Means, standard deviations (SD) and t-test results of questionnaire scores across teachers attending training courses in inclusion of students with disability

Variables	Mean (SD)		t	p	Confidence interval	
	2 or less	3 or more			Upper	Lower
<i>ATT thr</i>	2.13 (1.02)	1.28 (0.47)	6.61	<0.001	0.59	1.1
<i>ATT Chl</i>	2.54 (0.93)	3.43 (0.64)	-6.93	<0.002	-1.14	-0.63

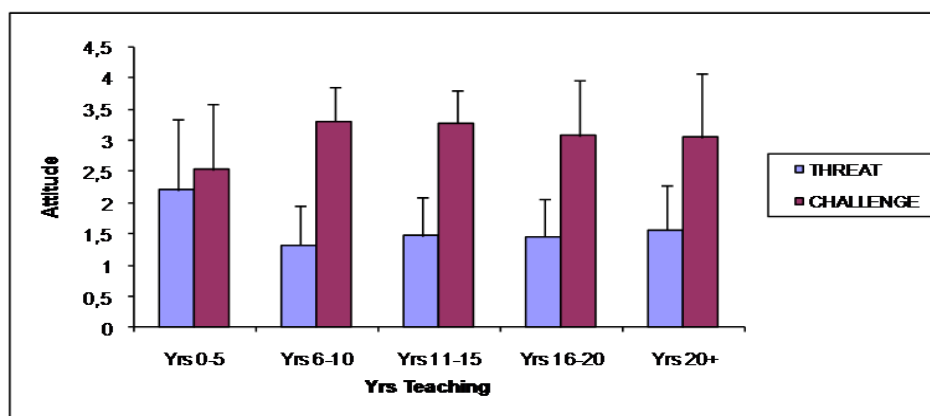


Fig.8. Attitudes of participants with different teaching year experience toward students with different disabilities

Experience in integrating students with disabilities: impact was assessed using T-tests between those who indicated they had experience and those who did not (structured by type of disability), presented in Tables 3, 4, 5.

Table 3. Means, standard deviations (SD) and t-test results of questionnaire scores across teachers having experience in integrating students with ID

Variables	Mean (SD)		t	p	Confidence interval	
	No	Yes			Upper	Lower
<i>ATT Threat</i>	2.38 1.06)	1.34 (0.51)	8.36	<0.001	-0.79	1.28
<i>ATT Challenge</i>	2.31 (0.93)	3.35 (0.66)	-8.28	<0.001	-1.29	-0.79

Table 4. Means, standard deviations (SD) and t-test results of questionnaire scores across teachers having experience in integrating students with VI

Variables	Mean (SD)		t	p	Confidence interval	
	No	Yes			Upper	Lower
<i>ATT Threat</i>	2.40 1.05)	1.36 (0.56)	8.45	<0.001	-0.82	1.32
<i>ATT Challenge</i>	2.29 (0.92)	3.32 (0.71)	-7.81	<0.001	-1.28	-0.76
<i>SSSE-VI</i>	1.98 (0.96)	3.18 1.10)	-6.86	<0.001	-1.54	-0.85

Table 5. Means, standard deviations (SD) and t-test results across teachers having experience in integrating students with PD

Variables	Mean (SD)		t	p	Confidence interval	
	No	Yes			Upper	Lower
<i>ATT Threat</i>	2.20 (1.03)	1.31 (0.52)	6.97	<0.001	-0.63	1.34
<i>ATT Challenge</i>	2.50 (0.93)	3.34 (0.73)	-6.16	<0.001	-1.07	-0.55

Results of the ascertaining experiment: The hypothesis about years in teaching was confirmed. Teachers with zero to five years of experience exhibited significantly greater threat and lower challenge than those with six years or more. At the same time, there are no significant differences with reference to the disaggregation every 5 years.

Our hypothesis about gender differences was supported and confirmed by existing research in the field. Male and female teachers differed in their attitude scores: females had more positive attitudes towards inclusion of disabled students than male teachers. It can be assumed that teachers who work in the conservative context of the Arab Israeli sector, may have gender-oriented attitudes like in other conservative communities as it had been pointed out in previous research.

Participation in an academic Adapted PE course: teachers in our sample who had attended academic courses pertaining to children with disabilities had gained an improved perceived self-efficacy of inclusion practice; after the training, these teachers substantially differed in their attitudes from teachers who had not attended such a course. Thus, our hypothesis about differences in attitudes towards students with disabilities between teachers who participate in an academic course designed to increase self-awareness of one's discrimination tendency and teachers who did not participate in such a course was supported.

Our hypothesis about the impact of having an acquaintance and experience with person with disability upon the readiness to include children with disabilities in PE was supported. It was found that teachers who had experience with students with disabilities, had more favorable attitude scores than their counterparts without such experience. Likewise, there are differences depending on the type of disability.

The second part of the chapter includes The Formative program "Sport is for everyone" that represents a basic component of the Pedagogical Model for the development of the PE teachers' positive attitudes towards students with disabilities and its validation.

We reiterate that the model assumes a set of deserving interactions among school (teachers-students), local community and families. These interactions maximize opportunities for students with disability to receive a variety of services in a supportive, effective climate and to receive a positive attitude during PE lessons from PE teachers.

The Formative program "Sport is for everyone" included 10 meetings, 2 hours each. The objectives of the program were to:

1. Increase education aspects of all the teachers-students in regard to inclusion, such as participation in PE lessons and all the activities, motivation, self-efficacy for both teachers-students and also sense of belonging to school.
2. Reduce risk factors such as discipline problems and involvement in violence.
3. Reduce risk social factors such as developing a sense of social rejection.

The program is based on the factors associated with the adapted physical education, which means that the teacher must provide an activity for all the children. Social psychologists have long been interested in understanding the conditions under which attitudes influence behaviors; thus, a growing body of research has highlighted the importance of affective attitudes as a key to correlate various behaviors. We must understand and predict behaviors, which means that behavior is determined by intentions which are in turn determined by attitudes, subjective norms and perceived behavioral control. These three underlying factors are beliefs that can form the basis of interventions to change behavior. In school, engagement is reflected in the relationships among students themselves and their teachers. Students who are at risk tend to have poorer relationships in school, and thus, they feel lonely. The program sought to change that set of circumstances by teaching PE teachers to become more aware that they have significant control over many important aspects of students' life, especially relationships.

The formative program "Sport is for everyone" was organized as a nonformal activity addressing several issues: Meeting 1: Motivation for participating in the program; Meeting 2-5: Concept of attitude and teacher's role in inclusion process; Meeting 3: focused on experience in integrating students with disabilities; Meeting 4: focused on acknowledging student voice; Meeting 5: focused on increasing implementing equity students and adults in schools; Meetings 6-8: Adapted physical activity (APA) (cognitive, affective-emotional and behavioral/ conative dimensions); Meetings 8-9: focused on Programming Objectives; Meeting 10: Summary, evaluation. All activities were structured according to the attitude dimensions: cognitive, affective-emotional and behavioral. Implementation of Formative program "Sport is for everyone" was correlated with others component of the model.

The Pedagogical Model for the development of the PE teachers' positive attitudes towards inclusion of students with disabilities, besides the above-mentioned strategies, included as a basic component the Formative program "Sport is for everyone", **was validated** during the formative and control stages of the experiment.

Our sample is focused on two major groups of similar initial essence: the control and the experimental group. Physical education teachers in the education system: there were 90 PE teachers selected based on negative attitudes toward students with disabilities at initial stage (45 women and 45 men). To validate the formative stage two groups were used- the findings of the experimental /intervention group who received a specific plan in order to succeed in the integration of students with disabilities (N=45, experimental group), were compared to those of the other group who did not receive any session or program (N=45, control group). Then again, we performed interviews with those students of the two groups, and we saw the ratio and the teachers' attitudes towards the integration of children with disabilities.

The main findings are presented below. We supposed that after experimental intervention based on specific pedagogical model, the PE teachers' attitudes can be changed toward students with disabilities in the classroom of physical education lessons. In order to highlight the influence on the experimental sample through our experimental activities, the subjects were retested using the same questionnaire *The Attitudes towards including students with a disability and Demographic questionnaire*. We compared the data obtained before and after experimental intervention (test and

posttest). In this case we used paired samples t test and a nonparametric version Wilcoxon two related samples.

The comparative results obtained by teachers from experimental group in the test stage and post-test stage, regarding the tendencies of positive attitudes are presented in Figure 9.

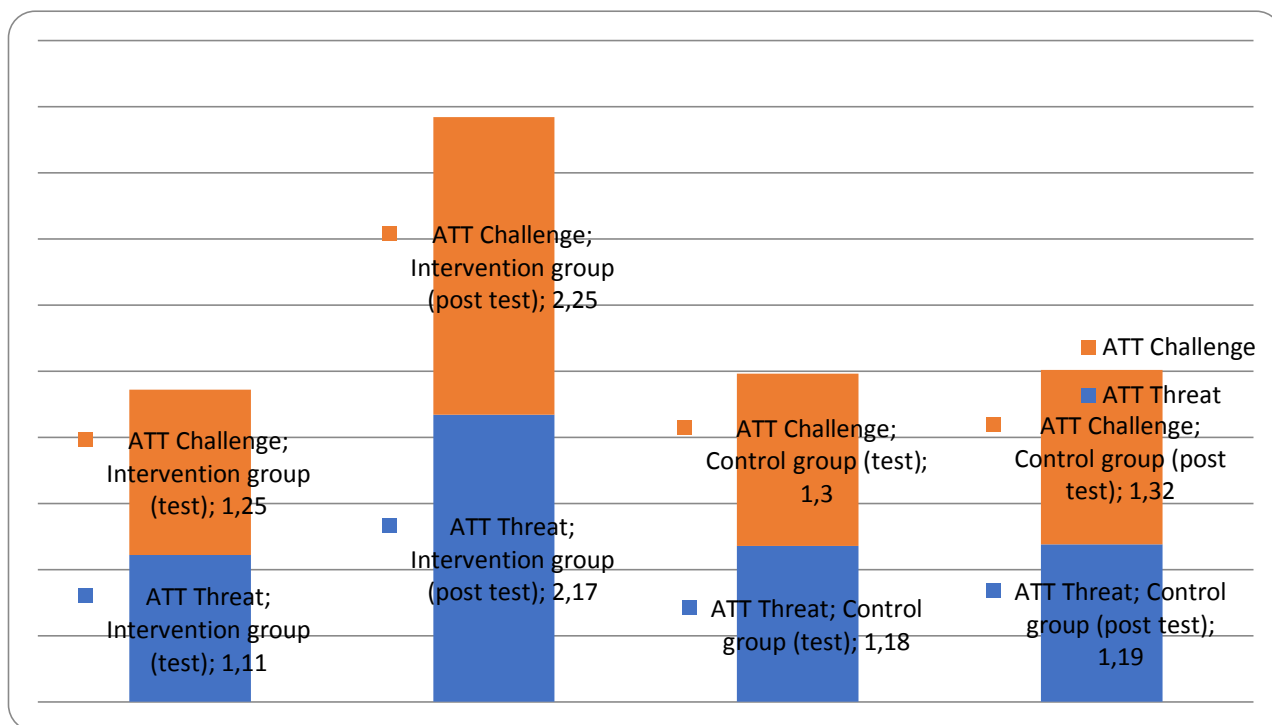


Fig. 9. The comparative results on attitude trends in PE teachers in control and experimental groups before and after experimental intervention

According to the results, there are differences between the means obtained by experimental group of teachers in pretest stage and after experimental intervention in posttest stage.

Significant changes made by experimental group of teachers are due to the general optimization of psycho-emotional states by developing active listening skills, by recognizing the importance of self-esteem and acceptance of others, by expanding personality traits, by developing communicative skills and by awareness of tolerant behavior toward children with disabilities.

The analysis by gender showed the same results. Both women and men from experimental group denotes differences between the means obtained by experimental group of teachers in pretest stage and after experimental intervention in posttest stage. In the control group there were no identified significant differences after experimental intervention (fig.10).

The comparison between pretest and post-test stages based on experience of PE teachers in working with children with disabilities elevated positive changes in their attitude's comparative with control group. The experimental group as experienced teachers as inexperienced changed their attitudes regarding physical education with children with disabilities.

Significant changes made by the experimental group of teachers are a consequence of learning the ability to perceive situations from the point of view of others; the skills of communicating to others; the recognition of differences between people and respect for each individual's individuality.

The experimental details connected to the PE teachers' attitudes are presented in figures 9, 10, 11 per groups: the control group versus the experimental group, divided also per categories such as gender and experience in working with children with disabilities, permitting us to ascertain the following situation: we can ascertain the significant change realized in the experimental group at time 2 (the post-test stage).

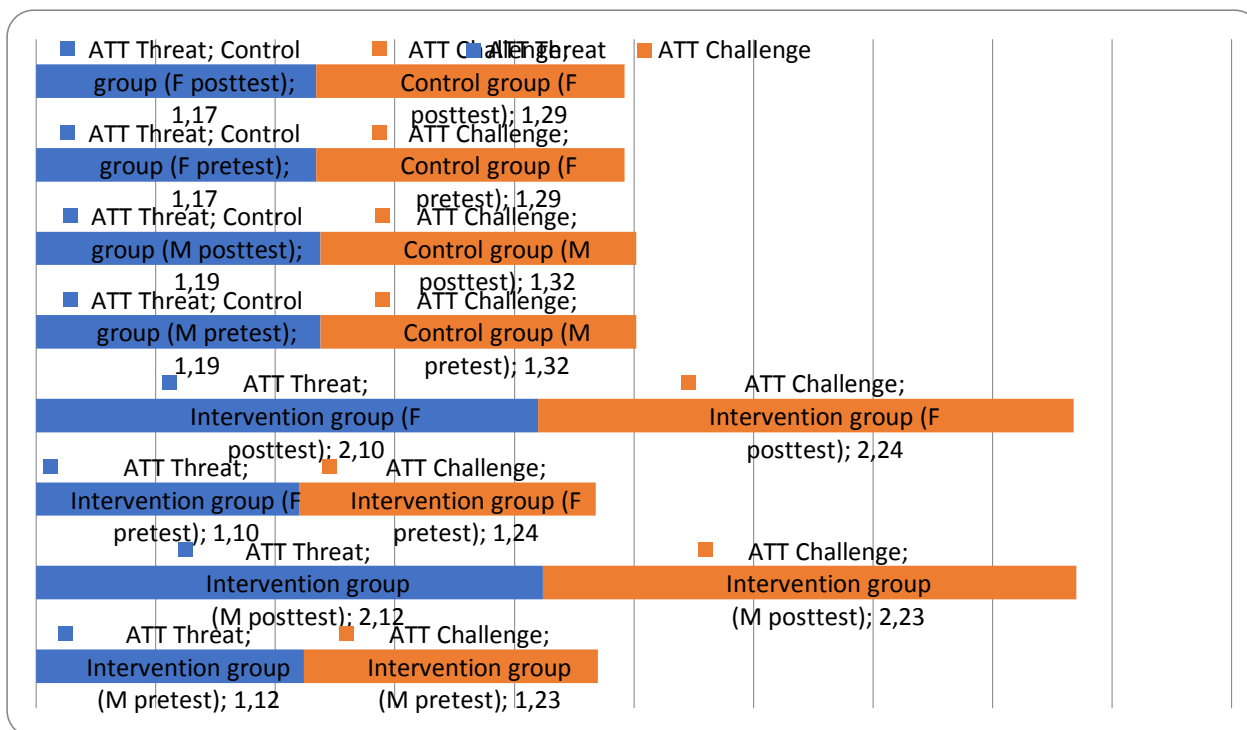


Fig. 10. The comparative results on attitude trends in PE teachers by gender in control and experimental groups before and after experimental intervention

The experimental group teachers who had participated at the formative intervention which had been focused on examining and modifying the stigmatic attitudes are approaching this time the integration issue as an opportunity to cope with a challenge and not just a risk, while on the opposite the subjects of the control group are still referring to the same situation as a risk. Most teachers who participated in the formative program described feelings of higher self-efficacy and positive attitudes towards the inclusion.

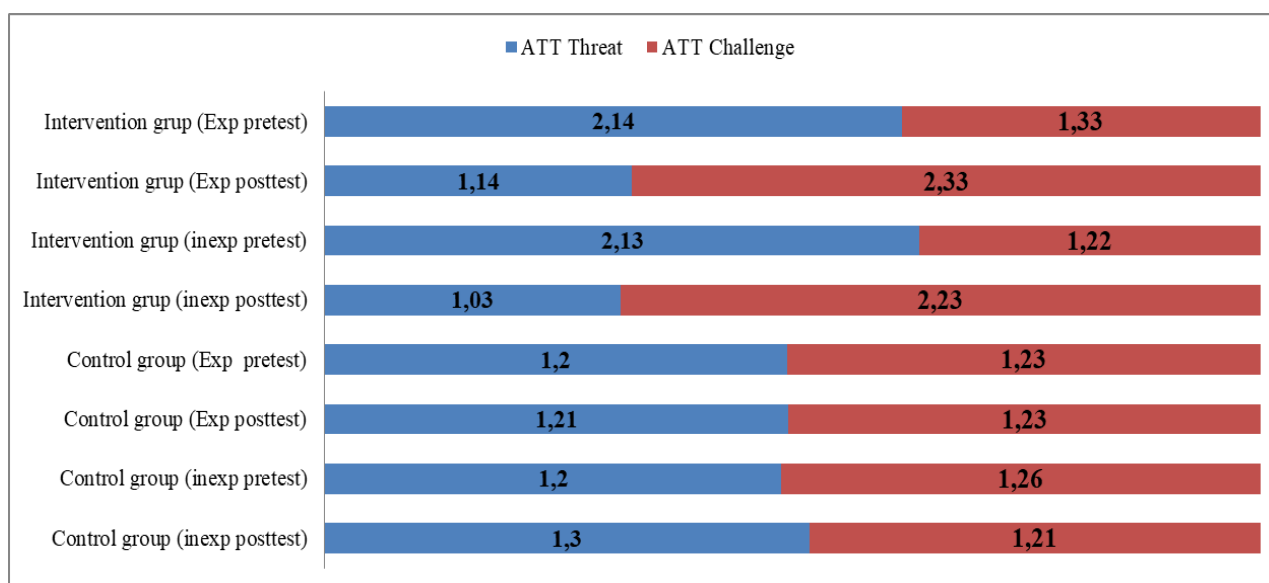


Fig. 11. The comparative results on attitude trends in PE teachers by experience in control and experimental groups before and after experimental intervention

The positive result of the research was confirmed by the positive results of PE teacher's adaptive activities with students with different disabilities – pre and post tests: (table 6).

Table 6. Results of PE teacher's adaptive activities – pre and post tests

	Pre-curs	Post-curs
PE teachers come to their class with a lot of adjustment (adallhon) to include students with intellectual disability (ID)	0,5	2,5
PE teachers that use with large balls and outstanding for students who have visual impairment (VI)	1	3
PE teachers that use with large balls and outstanding for students who have physical problems (PD)	1,5	4, 5

Special note: all students with disabilities were assisted to offer the feedback regarding PE teacher's attitudes (for example, the assistant noted their answers).

It was concluded that *gender, PE teacher participation in an academic course, teachers' experience in including students with disabilities, have a significant impact over inclusion and they can be exposed to a formative intervention.* The assessment of these indicators level in both groups showed the necessity of an intervention that could improve them and served as a criterion in elaboration of the formative program, in choosing the issues addressed during the intervention, and subsequently in elaborating/adapting the educational forms, strategies and methods.

Based on the students' answers, the Matrix of indicators of the positive attitude of PE teachers in the vision of students with disabilities (developed by us) was completed (Table 7).

Table 7. The Matrix of indicators of the positive attitude of PE teachers in the vision of students with disabilities

Nr.	Indicator	GE (nr)	GC (nr)
Cognitive dimension			
1	Knows how to encourage children with disabilities to take the same risks as other children so that they can win.	34	10
2	Knows how to teach children with different disabilities to access information in different ways.	37	22
3	Knows how to encourage children to understand and appreciate the differences of others	34	10
4	Knows how to support all children to participate equally in activities (taking into account their possibilities).	35	10
5	Responds to a child's individual needs (language, gestures, facial expressions for children)	33	15
Emotional dimension			
6	Recognize that every child can contribute	30	11
7	Recognize that every child is valuable	32	11
8	He/she is friendly, open and understanding	38	32
9	It is flexible to change / adapts to the needs of children	35	23
10	Model good communication so that children learn from what they see and hear	34	18
Behavioral (or intentional) dimension			
11	Encourages cooperation in lessons for children with and without disabilities	36	11
12	Encourages teamwork and child-to-child activities	39	19
13	It motivates children to come together to support each other	40	32
14	Encourages an inclusive environment by praising children who say they do not understand or ask for help or thank them for asking and then offer help or an explanation	37	11
15	Gives children enough time to understand what they are talking about and formulate their answers	34	12
16	It allows the children themselves to decide where to stay and to take part in activities	32	8

In table 7, the results of the vision of students from the experiential group (of teachers from GE) (GE) and from the control group (of teachers from GC) (GC) are presented.

Based on the students' answers, we conclude that the significant progress: *increased the positive attitude of PE teachers in the vision of students with disabilities from the experimental group (GE)/ with teachers involved in the training programme. We found significant changes in the attitude of teachers, structured in dimensions: cognitive, emotional, behavioral, exploring knowledge, emotions and PE teachers' behaviors toward students with disabilities.*

At the same time, it can be deduced from these interviews that before the formative stage, some students did not have the positive attitudes and satisfaction with the treatment they got from some of the physical education teachers. Also, we can understand that some of PE teachers realize the importance of inclusion of children with disabilities but they admitted that they did not have the skills and tools to deal with the difficulties of the inclusion and did not know how to successfully include children with disability. Regarding the administrators' opinion they understand also the importance of inclusion and they try to give all the possibilities of teachers in general, in particular PE teachers, to integrate these children in school. Some of the parents do not see that society respects these children and they think that there is need for a special program to engage students with disabilities.

At the same time, we would like to mention that the intervention program, despite of the progress, didn't achieve significant results in preventing the phenomenon of rejection towards students with disabilities at activities that might occur at and out of some schools. This can be explained through a social and psycho-pedagogical perspective. During the experiment period we observed that in the schools when teachers, involved in the program, cooperated well with parents and students without disabilities, and specialized services addressed to disable students, students with and without disabilities demonstrated more motivation to play / to study together.

From psycho-pedagogical perspective, assuming that changing stereotypical attitudes and transforming them into concrete actions is a more challenging and time spending mission beyond that of increasing awareness of the importance of inclusion and even of succeeding in the primary stage of implementation during the PE lessons. It can be argued that any practical intervention at behavior level requires a closer cooperation between family, students at risk, psychologists, teachers and community, requiring a complex and prolonged educational process whose successful implementation can be evaluated over time perspective.

We conclude the efficiency of the Pedagogical Model, activities and methods aimed at increasing inclusion process towards students with disabilities in PE class depends on the involvement of the educational factors concerned: family, school (PE teachers as a part of them), community and the students themselves. The relationships established among the different components of Pedagogical Model for the development of PE teachers' positive attitude towards inclusion of students with disabilities, validated during the implementation, positively influenced the intervention and the formative process as a whole.

GENERAL CONCLUSIONS AND RECOMMENDATIONS

The theoretical analysis and pedagogical experiment in the frame of our research allowed the determination and clarification of the theoretical-methodological basis of the *Pedagogical Model for the development of the Physical Education Teachers' positive attitudes towards inclusion of students with disabilities* in physical education activities.

The analysis of the theoretical benchmarks and the interpretation of the research results regarding the development of positive attitudes of physical education teachers towards the inclusion of students with disabilities in physical education activities confirmed the significance of the subject, by achieving the purpose and objectives, attesting to its theoretical and praxeological value, the scientific novelty.

Based on the analysis, the explanations and the interpretation of the theoretical, experiential aspects, as well as the data obtained during the pedagogical experiment, we can conclude the following:

1. Inclusion of students with disabilities in regular schools is an essential educational process which is recognized by several international documents. Teachers' attitudes regarding this process are recognized as crucial by different authors and documents. Based on international standards and literature review, we deduced the importance of educational strategies on improving the PE teachers' attitudes towards the inclusion of students with disabilities into PE activities, taking into account the specific needs of girls and boys, but also the sociocultural, education and family context etc.
2. Following the evolution of scientific trends regarding teachers' attitudes towards the inclusion of students with disabilities, the analysis of pedagogical, psychological, sociological and psycho-pedagogical approaches was undertaken. The problem under study allowed **establishing the essence of the basic concepts**: *teacher's attitudes to inclusion, dimensions of teacher's attitudes (subchapter 1.1), school' inclusive environment, inclusion, inclusive education, in relation to PE (subchapter 1.2.)*. The definitions on inclusive education and inclusive culture were reinforced. We also proposed our definitions of *positive attitude (Ch.1, p.35)*; *inclusive culture of school (Ch.1, p.40)*; the exhaustive definition of *inclusive education from a broad and a narrow perspective (Ch.1, p.49)*. In the frame of research, concepts of inclusion in education system and connections between inclusion and physical education were explored (*subchapter 1.3*). Moreover, *social, pedagogical and physiological backgrounds of inclusive physical education (subchapter 1.3.)* were specified.
3. **The theoretical significance of our research** is ensured by the contribution to the development of the concepts and theories of inclusion in relation to PE; identification of factors and indicators of inclusive education in relation with PE; contributions to the theory of education by exploring the concept of inclusive PE based on social, pedagogical and psychological foundations; contribution to changing the traditional paradigm that sport is an unimportant topic for students with disabilities to approach it as a key element for the implementation of inclusive PE lessons; analyzing various PE teacher's attitudes programs, systems and alternative facilities for disabled students to reduce the risk of their rejection.
4. *The Concept of developing physical education teachers' positive attitudes towards the inclusion of students with disabilities (subchapter 2.1)* was developed by author. The concept includes the following components: analysis of the physical education sector in Israel concerning inclusion; physical education adaptations for students with disabilities; and an overview of the sociocultural determinants of teachers' attitudes towards students with disabilities. The concept served as a theoretical and praxiological framework for including students with disabilities in PE lessons together with non-disabled students.
5. Given the importance of specialized teacher training in inclusive education, *Successful Inclusion points (Ch.2, p.70)*, a *set of principles of IE addressed to teachers (Ch.2, p. 84)*, the *Connection between PE teachers' attitudes and psycho-pedagogical strategies (Ch.2, p.85)*, the *Diagnostic Model for Changing Stigmatized Attitudes: Challenges vs. Goals and Practical Steps (Ch.2, p. 86)*, the *Attitude Modification construct (Ch.2, p.88)*, the *Matrix of indicators of the positive attitude of PE teachers in the vision of students with disabilities (Ch.3, p.133)* were developed by the author. To forming the positive attitude of PE teachers, *the teacher's new promoting role as a mediator/ model in the integrative process of students with disabilities was proposed (Ch.2, p.87)*.
6. Based on previously and present research we state that the Physical Education teacher's role is to keep a vital atmosphere in the PE classes containing all students, constituting a live model for his regular students in the process of learning to accept others and deal tolerantly with their difference. By exploring *Pedagogical Model for the development of the PE teachers' positive attitudes towards inclusion of students with disability (subchapter 2.3)* and implementing the *formative program "Sport is for everyone" ((subchapter 3.2)*, the Physical Education teacher is provided with a praxiological tools to include every student with/without a disability in his/her classes. The implementation of the formative program "Sport is for everyone" (subchapter 3.2) ensures a successful practice in the educational environment and represents the premise of

promoting the values of respect, active support, and empowerment of students with disabilities; and establishing inclusive school culture.

7. The results of the experimental research (Chapter 3) demonstrate the change of attitude towards the students' disability as a threat (problem) to the approach as a challenge (opportunity for development) in their involvement in physical education activities; improving the willingness of students with disabilities to participate in physical education activities together with students without disabilities.
8. Research contributes to the enrichment of the theoretical knowledge and methodological approach regarding the inclusive PE in the schools in Arab sector of Israel with an emphasis on: the concepts of inclusion in education system in correlation with teachers' attitude towards disabled children inclusion; the complexity of correlations between the attitudes of PE teachers and between the variables of: participation in an academic course, experience in integrating disabled students, gender, years of work experience.
9. **The scientific originality and novelty of the research** consists in the examination of changing trends in the attitudes of physical education teachers towards the inclusion of students with disabilities in their regular lessons at a historical and conceptual level; updating the concepts of inclusion, inclusive school environment, positive attitudes of physical education teachers; helping to change the traditional paradigm that sport is an unimportant subject for students with disabilities, to address it as a key inclusion element in physical education lessons; establishing indicators for evaluating the attitudes of physical education teachers towards the inclusion of students with disabilities in physical education activities; development, implementation and validation of the Pedagogical Model for the development of the Physical Education Teachers' positive attitudes towards inclusion of students with disabilities in physical education activities, based on the formative program "Sport is for everyone".
10. **The scientific problem solved in the research** consists in increasing the positive attitudes of physical education teachers towards the inclusion of students with disabilities in physical education activities and, as a result, increasing the motivation of disabled students to participate in physical education lessons together with non-disabled colleagues by: establishing the epistemological and methodological context of the training of physical education teachers, based on the correlations between attitudes and variables: participation in a special university course, experience in integrating students with disabilities, gender, years of work experience (in teaching); exploring the predictive factors of teachers' attitudes towards the inclusion of students with disabilities; adapting the curriculum and physical education activities to the specific needs of students with disabilities, reducing the harm done to students with disabilities; the development of some indicators of the positive attitude of physical education teachers in the view of students with disabilities; and by experimentally demonstrating the functionality of the Pedagogical Model for the development of the PE teachers' positive attitudes towards inclusion of students with disability, based on the formative program "Sport is for everyone".
11. Thus, **the scientific research problem** was solved by design, implementing and validating the Pedagogical Model for the development of the PE teachers' positive attitudes towards inclusion of students with disability that contributed to make their education more efficient, confirmed by increased participation of students with disability together with non-disabled students in PE lessons in the Arab sector of Israel schools, ensuring decreasing the negative impact to disabled students, enhancing their inclusion for personal and social development, and creating an inclusive environment.

This research is a valuable scientific-methodological tool for PE teaching staff, school managers, special inclusion personnel in their educational and managerial activity, also for parents and community representatives.

RECOMMENDATIONS

Recommendations for policy makers:

- Consider the unique traits and special needs of the students and adapt the environmental conditions to include them.
- We conclude that in-service education programme planning of adapted physical activity (APA) should be provided to all PE teachers. Training actual adaptations and empowerment practices applied to real cases during the coursework, as well as well-organized practicum sessions where adaptive teaching practices and provision of support can be practiced are strongly recommended for achieving this purpose.
- It is necessary to include a specific program in the education system and make it affective towards children with disabilities in several areas in the school.

Recommendations for environmental adaptations

- Mind the physical conditions necessary for a pleasant and comfortable atmosphere. The class should be with special adaption for students with disabilities, and decorated in such way to create a sense of comfort and belonging among students.
- Providing the necessary space and equipment for the class to help the teacher to include all his students.

Recommendations for curriculum makers

- Due to our research, it is recommended not only to have a unique course on the subject of integration processes of students with special needs, but also to include it in the teaching material of regular courses in Colleges of Physical Education. Normalization of the learning materials about integration contributes to reducing the sense of threat which teachers might face when they reach a point where they need to integrate students with disabilities as part of the school curriculum.
- To build a new teaching plan in physical education, taking into consideration students with special needs, the differences between students and their individual goals.

Recommendations for school managers

- Encouraging regular attendance and reducing absences for students with disabilities and rewarding the student with few delays and absences with a class prize and a school prize.
- To encourage physical education and to increase its importance for all the students, and rewarding the class with more participation in break activity.
- Involvement of parents – to maintain regular contact with parents or close people of these students.
- To encourage parents to contact the class teacher and subject teachers anytime, for any relevant reason. The classroom teachers have to contact parents especially in positive contexts such as the student progress or improvement of behavior, to increase their motivation as well as their self-image.

Recommendations for PE teachers

- Building a detailed profile of physical education teachers "sensitive to inclusion" in order to succeed to integrate children with disabilities in their classes and in sport activities.
- Providing the student and teacher with a clear educational policy, regarding 'to do' and 'not to do' guidelines for children with various disabilities.
- Fostering teaching resources providing knowledge as well as specific solutions to sample case studies or profiles using all the methods warranted to empower critical thinking about real-life situations, including children with varied abilities and disabilities in class settings.

- Increasing the amount of guided training for inclusion-type contexts, thus raising confidence in positive outcomes of the applied practices.
- Including simulations and other sensitizing agents into introductory teacher courses, for challenging the normative belief.
- It is highly recommended to hold regular meetings between future physical education teachers and children with disabilities, to increase teachers' sense of belief in their ability to teach these students effectively. For these meetings to be beneficial, it is necessary for teachers who have knowledge and experience to monitor them.
- Presentations of youth with disabilities for other students to explain about their bodies and how they deal with their disabilities are another mean of preparation to integration; it should be used to advance the processes of both inclusion and integration.

Research limits: the research also highlighted some limitations, such as insufficient testing of the impact of the age indicator on the inclusion of students with disabilities; low awareness of protective factors against potential rejection and inclusion of other minorities such as Bedouin or Druze; insufficient involvement of other stakeholders in creating an inclusive environment at the level of society. At the same time, the research opens a new "door" for investigating different aspects of the inclusion of people with disabilities in physical education activities, based on intersectionality.

Research perspectives: in addition to PE teachers who may function as relevant change agents within the school system provided that they are well equipped with integration friendly attitudes comprehending the long run benefit and possessing coping resources as suggested by the current research, it is recommended to honestly revise the whole system culture and enforce attitude changing implementation wherever it is needed, so that the integration policy is not just contemplated, but also successfully practiced. After mapping the attitudinal systemic picture, it is suggested to proceed to test the connections between the inclusion of students with disabilities and teachers' attitudes in other subjects besides PE. Therefore, more research that could shed light on the development of rejection prevention programs for people with different types of disabilities is needed.

BIBLIOGRAPHY

Romanian language

1. BUCUN, N., VRABIE, S. Atitudinea cadrelor didactice față de incluziunea elevilor cu autism în școală. In: *Univers Pedagogic*, 2017, nr. 4(56), pp. 66-76. ISSN 1811-5470.
2. CALLO, T. *Pedagogia practică a atitudinilor*. Chișinău: Litera, 2014. 240 p. ISBN 978-9975-74-340-2
3. CARA, A. *Implementarea educației incluzive în Republica Moldova: Studiu de politici publice*. Chișinău: Lexon-Prim, 2015. 60 p. ISBN 978-9975-3030-4-0.
4. *Educație incluzivă: Unitate de curs* / Balan V., et al. – Ed. rev. și compl. – Chișinău: S. n., 2017 (Tipogr. «Bons Offices»). 308 p. ISBN 978-9975-87- 298-0
5. MALCOCI, L., CHISTRUGA-SINCHEVIC, I. *Incluziunea elevilor cu CES în școlile din comunitate*. Studiu sociologic, Chișinău, 2015, 56 p. https://aliantacf.md/wp-content/uploads/2018/07/APSCF_incluziunea-copiilor-CES-2015.pdf
6. RACU, A., POPOVICI, D.V., DANII, A. *Educația incluzivă. Ghid pentru cadrele didactice și manageriale*. Chișinău: "Tipografia Centrală", 2009. 150 p.
7. RUSNAC, V. Implementarea educației incluzive în Republica Moldova: provocări, realizări și viziuni. In: *Asistența complexă a copiilor cu cerințe educaționale speciale în mediul educațional incluziv*. Materialele conferinței științifice internaționale. Chișinău, UPS "Ion Creangă". 2020, pp.8-18. ISBN 978-9975-46-480-2.
8. TIMUȘ, A. Atitudinea cadrelor didactice față de integrarea copiilor cu deficiențe mintale și de auz In: *Asistența complexă a copiilor cu cerințe educaționale speciale în mediul educațional incluziv*. Materialele conferinței științifice internaționale. Chișinău, UPS "Ion Creangă". 2020, pp.244-257. ISBN 978-9975-46-480-2.

English language

9. *A Guide for ensuring inclusion and equity in education*. UNESCO. Assistant Director-General for Education, 2010-2018 (Qian Tang). 2017, 46p. ISBN 978-92-3-100222-9 (print/pdf).
10. AJZEN, I. From intentions to actions: A theory of planned behavior. In: Kuhl, J. et al. *Actions Control From Cognition to Behavior*. Springer-Verlag, Berlin Heidelberg, 1985, pp.11-39. DOI: 10.1007/978-3-642-69746-3_2
11. ALLPORT, G. "Attitudes," in *A Handbook of Social Psychology*, ed. C. Murchison. Worcester, MA: Clark University Press, 1935, p. 789–844.
12. AZORÍN, C., and AINSCOW, M.. "Guiding Schools on Their Journey Towards Inclusion." *International Journal of Inclusive Education*, 2020, 24 (1), pp. 58–76. ISSN: 1360-3116 (Print)
13. AVISSAR, G. Inclusive education in Israel from a curriculum perspective: an exploratory study. In: *European Journal of Special Needs Education*. 2011, iFirst article, p.1-15. DOI:[10.1080/08856257.2011.613602](https://doi.org/10.1080/08856257.2011.613602)
14. AVRAMIDIS, E, NORWICH, B. Teachers' attitudes towards integration/inclusion: a review of the literature. *European Journal of Special Needs Education*. 2002;17(2):129–47. pp.201-211 doi: 10.1080/08856250210129056.
15. BANDURA, A. "Social Learning Theory" (PDF). General Learning Corporation. Archived from the original (PDF) on 24 October 2013. Retrieved 25 December 2013.
16. BLOCK, M.E. *A Teacher's Guide to Including Students with Disabilities in General Physical Education*. Baltimore:Paul H.BrookesPublishingCo. 2007, 448p. ISBN-9-781-5576-6835-6
17. de BOER A, PIJL SJ, MINNAERT A. Regular primary school teachers' attitudes towards inclusive education: a review of the literature. *International Journal of Inclusive Education*. 2011;15(3):331–53. doi: 10.1080/13603110903030089
18. BOUKHARI, H. Invisible victims: working with mothers of children with learning disabilities. In L. Abu-Habib(Ed). *Gender and disability: Women's experiences in the Middle East*. London, 1997. pp.36-77.

<https://oxfamlibrary.openrepository.com/bitstream/handle/10546/121184/bk-gender-disability-middle-east-010197-en.pdf?sequence=5>

19. BOURSIER, C.&KAHRS, N. Inclusion in sports, In: H.Van Coppenolle, J,-C.De Potter, A. Van Peteghem, S.Djobova &K.Wijns(Eds) *Inclusion and integration through adapted physical activity: end report of the Thematic Network Educational and social Integration of persons with a Disability through Adapted physical Activity*, available. 2003, pp.8-28. Print
20. CORBIN, C.B. Physical activity for everyone: What every physical educator should know about promoting lifelong physical activity. *Journal of Teaching in Physical Education*. 2002.p128-144. DOI: <https://doi.org/10.1123/jtpe.21.2.128>
21. **DANIEL-SHAMA, E.**, Forming teachers' positive attitudes towards students with disabilities. În: *Studia Universitatis Moldaviae*. Chişinău: CEP USM, nr.11, 2020, p. 28-32. ISSN 1857-2103.
22. **DANIEL-SHAMA, E.**, General overview of the physical education in Israel. În: *Studia Universitatis Moldaviae*. Chişinău: CEP USM, nr.9 (159), 2022, pp. 104-107. ISSN 1857-2103
23. **DANIEL-SHAMA, E.**, Forming inclusive education environment for children with disabilities in Israel. In: *Conferința științifică națională cu participare internațională „Integrare prin cercetare și inovare”*, USM, 10-11 noiembrie 2020, pp. 202-205 CZU: 376(569.4)
24. *Desk Review for Developing Measures on Discriminatory Attitudes and Social Norms towards Children with Disabilities in Europe and Central Asia region*, 2018. UNICEF, 2019, 51 p. <https://www.unicef.org/eca/media/13391/file>
25. FAISON-HODGE, J., & PORRETTA, D.L. Physical Activity Levels of Students With Mental Retardation and Students Without Disabilities. In: *Adapted Physical Activity Quarterly*, 2004, 21, p.139-152. DOI:[10.1123/apaq.21.2.139](https://doi.org/10.1123/apaq.21.2.139)
26. FEIGIN, N., TALMOR, R.&ERLICH, I. *Causes for abrasion in physical education teachers in classes integration children with special needs: final research report* (Netanya, Israel, Zinman College for physical Education and Sport Sciences). 2002. Print
27. FLORIAN, V., KATZ, S., The impact of cultural, ethnic, and national variables on attitudes towards the disabled in Israel: A review In: *International Journal of Intercultural Relations*, Volume 7, Issue 2, 1983, pp. 167-179. [https://doi.org/10.1016/0147-1767\(83\)90019-6](https://doi.org/10.1016/0147-1767(83)90019-6)
28. FLORIAN, V., *Attitudes towards people with a disability – comparison between Jewish and Arab youth in Israel*. 1990. [https://doi.org/10.1016/0147-1767\(83\)90019-6](https://doi.org/10.1016/0147-1767(83)90019-6) https://www.kshalem.org.il/uploads/pdf/article_1587_1550921145.pdf
29. *Global education monitoring report, 2020: Inclusion and education: all means all*. Global Education Monitoring Report Team. UNESCO, 2020, 502 p. ISBN 978-92-3-100388-2
30. GOODWIN, D.& WATKINSON, E. Inclusive Physical Education From the Perspective of Students With Physical Disabilities. *Adapted Physical Activity Quarterly*, 2000, 17, pp.144-160.
31. GOMPEL, T. Special education in Israel towards the 21st century: where did we come from and where are we aiming? *Special Education and Rehabilitation*, 1999, 14(2), pp. 82-71 <https://www.nitzan-israel.org.il/media/408916/Special-Education-in-Israel.pdf>
32. HUTZLER, Y., ZAMIR, G.& FLIESS-DOUER, O. Inclusion children with physical disabilities in physical education: facilitators and limiting factors. *Issues in Special Education and Rehabilitation*, 2004, 19(1), pp.33-58. doi: 10.1123/apaq.19.3.300.
33. HUTZLER, Y., **DANIEL-SHAMA, E.** Attitudes and Self-Efficacy of Arabic-speaking Physical Education Teachers in Israel toward Including Children with Disabilities. *International Journal of Social Science Studies*, September 2017. 5(10):28 DOI: 10.11114/ijsss.v5i10.2668

34. *Initial Report Concerning the implementation of the Convention on the rights of persons with disabilities*. State of Israel, Ministry of Justice, Reply to List of Issues in relation to Israel's Initial Report. Presented to the UN CRPD Committee, 2022. 90 p. [cited 21.02.2020] Available:
https://www.gov.il/BlobFolder/reports/crpd_explained_text_and_guides/en/sitedocs_human_rights_convention_crp2022_appendix.pdf
35. *Inclusive teaching: Preparing all teachers to teach all students*. Policy paper 43. UNESCO, 2020, 16p. ED/GEM/MRT/2020/PP/43
36. INCE, S. Preschool teacher candidates' attitudes and concerns about inclusive education taking into consideration whether they took special courses or not at university. *International Journal of Early Childhood Education and Research*, 2012, 1(3), 1–19. <http://ijecer.net/pfi-depo/v1n3/seyda.pdf>
37. KOLB, D. *Experiential Learning: experience as the source of learning and development*. Englewood Cliffs, NJ: Prentice Hall. 1984. Print
38. KUDLACEK, M. Components of attitudes toward inclusion of students with physical disabilities in Physical Education in the revised "ATIPDPE-R" instrument/scale for prospective Czech educators. In: "*Acta Universitatis Palackianae Olomucensis. Gymnica*", 2007, 37(1), pp. 13-18. ISSN 1212-1185 (Print); ISSN 1213-8312 (On-line)
39. LAHAD, M., SCHACHAM, M., AYALON, O. *The "Basic PH" Model of Coping and Resiliency. Theory, Research and Cross-Cultural Application*. Jessica Kingsley Pub., London & Philadelphia, 2012, 288p. Print
40. LEYSER, Y, KIRK, R. Evaluating Inclusion: an examination of parent views and factors influencing their perspectives. *International Journal of Disability, Development and Education*. 2004; 51(3): pp.271–285. Doi: 10.1080/1034912042000259233
41. LIFSHITZ, H., GLAUBMAN, R. & ISSAWI, R. Attitudes toward inclusion: the case of Israeli and Palestinian regular and special education teachers. *European Journal of Special Needs Education*, 2004, 19, p.171-190 DOI:[10.1080/08856250410001678478](https://doi.org/10.1080/08856250410001678478)
42. MANGOPE, B., MANNATHOKO, M.C., KUYINI, A.B. Pre-service physical education teachers and inclusive education: attitudes, concerns and perceived skill needs in *International Journal of Special Education*, Vol 28, No: 3. 2013, p.82-92 <https://files.eric.ed.gov/fulltext/EJ1024424.pdf>
43. MORLEY, D., BAILEY, R., TAN, J., & COOKE, B. Inclusive physical Education: Teachers' views of including pupils with Special Educational Needs and/or disabilities in general physical Education. *European Education Review*, vol II (I), 2005, p.84-107. <https://doi.org/10.1177/1356336X0504982>
44. OBRUSNIKOVA, I. Physical Educators' Beliefs about Teaching Children with Disabilities. In: *Percept Mot Skills*. 2008 Apr;106(2):637-44. Doi: 10.2466/pms.106.2.637-644
45. Organization for Economic Cooperation and Development [OECD]. *Students with disabilities, learning difficulties and disadvantages: Statistics and indicators*. Paris: OECD Publishing; 2005, 154 p. ISBN 92-64-00980-9 –pp.23-30
46. REID, G. Defining adapted physical activity. In Steadward, R., Wheeler, D. & Watkinson, E. (Eds.), *Adapted Physical Activity*, 2003, pp. 11-25. Edmonton, AB: University of Alberta Press.
47. RIZZO, T.L. & VISPOEL, W.P. Changing Attitudes about Teaching Students with Handicaps In: *Adapted Physical Activity Quarterly*. Volume 9: Issue 1. 1992, pp. 319-327. DOI: <https://doi.org/10.1123/apaq.9.1.54>
48. SAVOLAINEN, H., ENGELBRECHT, P., NEL, M., MALINEN, P. Understanding teachers' attitudes and self-efficacy in inclusive education: implications for pre-service and in-service

- teacher education. *European Journal of Special Needs Education*. 2012; 27(1):51–68. Doi: 10.1080/08856257.2011.613603
49. SCHLEICHER, A. *Teaching and Learning International Survey*. TALIS2018. Insights and Interpretations. © OECD 2020, 73 p. ISSN 9789264805972 (PDF)
 50. SHARMA, U., FORLIN, C., LOREMAN, T., EARLE, C. Pre-service teachers' attitudes, concerns and sentiments about inclusive education: an international comparison of the novice pre-service teachers. *International Journal of Inclusive Education*. 2006; 21(2), pp.1-24. <https://files.eric.ed.gov/fulltext/EJ843609.pdf>
 51. TSAKIRIDOU, H., POLYZOPOULOU, K. Greek Teachers' Attitudes toward the Inclusion of Students with Special Educational Needs. *American Journal of Educational Research*. 2014; 2(4):208-218. doi:10.12691/education-2-4-6.
 52. TRIPP, A., FRENCE, R. & SHERRILL, C. Contact theory and attitudes of children in physical education programs toward peers with disability. *Adapted Physical Quarterly*. 1995, pp.323-332. DOI:10.1123/APAQ.12.4.323
 53. UNESCO, *Policy Guidelines on Inclusion in Education*, 2009
<https://unesdoc.unesco.org/ark:/48223/pf0000177849>
 54. UNESCO. *The SALAMANCA Statement and Framework for Action on Special Needs Education*. Paris: UNESCO; 1994. 50 p. ED.94/WS/18
 55. *UN Convention on the Rights of the Child* (1989) [cited 21.02.2020] Available at: <https://www.ohchr.org/en/instruments-mechanisms/instruments/convention-rights-child>
 56. *UN Convention on the Rights of Persons with Disabilities* (2006) [cited 21.02.2020] Available: <https://www.ohchr.org/en/instruments-mechanisms/instruments/convention-rights-persons-disabilities>
 57. VAZ, SH., WILSON, N., FALKMER, M., SIM, A., SCOTT, M., CORDIER, R., FALKMER, R. Factors Associated with Primary School Teachers' Attitudes Towards the Inclusion of Students with Disabilities. *PLoS ONE* 10(8): e0137002. Published: August 28, 2015; pp132-144. <http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0137002>
 58. WALKER, Th. J., "Attitudes and Inclusion: An Examination of Teachers' Attitudes Toward Including Students with Disabilities" Dissertations. 2012, Paper 401. 109p. [cited 21.02.2020] Available at: http://ecommons.luc.edu/luc_diss/401
 59. WEISEL, A., DROR, O. School climate, sense of efficacy and Israeli teachers' attitudes toward inclusion of students with special needs. *Education, Citizenship and Social Justice*. 2006; 1(2); pp.157–74. doi:10.1177/1746197906064677
 60. *Welcoming diversity in the learning environment: teachers' handbook for inclusive education*. UNESCO Office Bangkok and Regional Bureau for Education in Asia and the Pacific/Person as author: Kaplan, Ian, Bista, Min Bahadur. 2022, 198p. ISBN 978-92-9223-692-2
- Internet references:**
61. <https://academic.oup.com/heapro/article/21/3/238/559289/Contextualizing-salutogenesis-and-Antonovsky-in>
 62. *Inclusive School Physical Education and Physical Activity* [cited 21.05.2018] https://www.cdc.gov/healthyschools/physicalactivity/inclusion_pepa.htm
 63. WATSON, S. *Physical Education Adaptations for Students with Disabilities*, 2019 [cited 28.02.2020] <https://www.thoughtco.com/physical-education-for-students-with-disabilities-3111349>
 64. *People with Disabilities in Israel 2021: Facts and Figures*. Publish Date: 26.06.2022 https://www.gov.il/en/Departments/General/pwd_israel_2021_statistics
 65. *The Israel Physical Activity Report Card for Children and Adolescents*, 2022 [cited 2.10.2022] <https://www.activehealthykids.org/wp-content/uploads/2022/11/Israel-report-card-short-form-2022.pdf>

LIST OF AUTHOR'S PUBLICATIONS ON THE TOPIC OF THE THESIS SHAMA Einas

2. Articole în diferite reviste științifice:

2.3. în reviste din Registrul Național al revistelor de profil, cu indicarea categoriei:

Categoria A

1. DANIEL-SHAMA, E. (coaut.), HUTZLER, Y. *Attitudes and Self-Efficacy of Arabic-speaking Physical Education Teachers in Israel toward Including Children with Disabilities*. In: *International Journal of Social Science Studies* 5(10):28, September 2017. DOI: 10.11114/ijsss.v5i10.2668, **2,18 c.a.**

https://www.researchgate.net/publication/320023059_Attitudes_and_Self-Efficacy_of_Arabic-speaking_Physical_Education_Teachers_in_Israel_toward_Including_Children_with_Disabilities

Categoria B

1. DANIEL-SHAMA, E. *Forming teachers' positive attitudes towards students with disabilities*. În: STUDIA UNIVERSITATIS MOLDAVIAE, Seria Științe ale Educației, nr.11, 2020, p.28-32, Chișinău: CEP USM, ISSN 1857-2103, ISSN 2345-1025, **0,57 c.a.**
<https://educational.studiamsu.md/wp-content/uploads/2022/01/5.-p.-28-32-1.pdf>
2. DANIEL-SHAMA, E. *Theoretical aspects of the physical education teachers' attitudes towards students with disabilities*. În: STUDIA UNIVERSITATIS MOLDAVIAE, Seria Științe ale Educației, nr.5(155), 2022, p.124-129, Chișinău: CEP USM, ISSN 1857-2103, ISSN 2345-1025, **0,52 c.a.**
<https://educational.studiamsu.md/wp-content/uploads/2022/06/21.-p.124-129.pdf>
3. DANIEL-SHAMA, E. *General overview of the physical education in Israel*. În: STUDIA UNIVERSITATIS MOLDAVIAE, Seria Științe ale Educației, nr.9(159), 2022, p.104-107, Chișinău: CEP USM, ISSN 1857-2103, ISSN 2345-1025, **0,40 c.a.**
<https://educational.studiamsu.md/wp-content/uploads/2022/12/14.p.104-107.pdf>
4. DANIEL-SHAMA, E. *The teacher's attitude towards students with sen from a socio-ecological perspective*. În: Revista de teorie și practică educațională "Didactica Pro...", Chișinău, Centrul Educațional PRO DIDACTICA: Casa editorial-poligrafică „Bons Offices” S.R.L., nr.4(140), 2023, p.9-11, ISSN 1810-6455, **0,38 c.a.**
<https://doi.org/10.5281/zenodo.8289390/>

3. Articole în culegeri științifice

3.2. culegeri de lucrări ale conferințelor internaționale (Republica Moldova)

1. DANIEL-SHAMA, E., BODRUG-LUNGU, V. *The socio-ecological framework of inclusion of students with sen in physical education activities*. In: *Proceedings of CIEA 2023 The Sixth International Conference on Adult Education "Education for peace and sustainable development"*, November 9th-11th, 2023, Moldova State University, Chisinau (Republic of Moldova), **0,48 c.a.**, in press. <https://ciea.usm.md/>

4. Materiale/ teze la foruri științifice:

4.3. conferințe științifice naționale cu participare internațională:

1. DANIEL-SHAMA, E. *The conceptual context of attitudes of physical education teachers to students with disability*. În: *Materialele Conferinței științifico-practice naționale cu participare internațională "Formarea inițială și continuă a psihologilor în domeniul protecției copilului față de violență"* 26 octombrie 2018, Universitatea Pedagogică de Stat „Ion Creangă”, Facultatea Psihologie și Psihopedagogie Specială, Catedra Psihologie. Chisinau, 2018, p.118-126, **0,42 c.a.**
https://ibn.idsi.md/sites/default/files/imag_file/118-126_0.pdf
2. DANIEL-SHAMA, E. *Forming inclusive attitudes of physical education teachers in the arab sector schools Israel*. În: *Rezumatele Conferinței Științifice cu participare internațională „Integrare prin cercetare și inovare”*, 7-8 noiembrie, 2019, Institutul de Cercetare și Inovare a Universității de Stat din Moldova, Chișinău: CEP USM, 2019, p.131-134, ISBN 978-9975-149-50-1, **0,22 c.a.**
https://ibn.idsi.md/sites/default/files/imag_file/St_Sociale_Vol_1_2019.pdf
3. DANIEL-SHAMA, E. *Forming inclusive education environment for children with disabilities in Israel*. În: *Rezumatele Conferinței Științifice naționale cu participare internațională „Integrare prin cercetare și inovare”*, 10-11 noiembrie, 2020, Institutul de cercetare și Inovare a Universității de Stat din Moldova. Chișinău: CEP USM, 2020, p.202-205. ISBN: 978-9975-152-53-2; 978-9975-152-54-9, **0,25 c.a.**
https://cercetare.usm.md/wp-content/uploads/Stiinte_sociale_Vol.1.pdf

ANNOTATION

SHAMA Einas, *Developing of positive attitudes of physical education teachers towards inclusion of children with disabilities*, PhD in education sciences, Chisinau, 2024

Thesis structure: Annotations, Acronyms, Introduction, 3 chapters, 160 pages of basic text, 20 tables, 21 figures, Conclusions and recommendations, Bibliography (208 titles), 6 appendices. The obtained results are published in 9 scientific publications.

Key-words: positive attitudes, physical education, inclusion, students with disabilities, integration, inclusive education, motivations, social stereotype, children with special needs.

The Field of Research: General Theory of Education.

The Goal of the research: consists of elaboration and validation of the Pedagogical Model for the development of the Physical Education Teachers' positive attitudes towards inclusion of students with disabilities in physical education activities to make their education more efficient.

The research objectives: to explore the concept and dimensions of teachers' attitudes to inclusion; to analyze the evolution and elucidate the concepts of inclusion in education system and connections between inclusion and physical education (PE); to elaborate a theoretical and praxiological framework of including students with disabilities in PE lessons together with nondisabled students; to examine the complexity of correlations between the PE teachers' attitudes and variables of: participation in an academic course, work experience with students with disabilities, gender; to validate the Pedagogical Model for the development of the Physical Education Teachers' positive attitudes towards inclusion of students with disabilities in PE activities to make their education more efficient.

Scientific novelty and originality of the research: the concepts of inclusion, inclusive school environment, and positive attitudes of physical education teachers were updated; contributing to changing the traditional paradigm that sport is an unimportant topic for students with disabilities to approach it as a key element of inclusion in PE lessons; the *Pedagogical Model for the development of the Physical Education Teachers' positive attitudes towards inclusion of students with disabilities* in physical education activities to make their education more efficient was validated.

The scientific results obtained in the research: identification and validation of the theoretical and methodological landmarks of the Pedagogical Model for the development of the Physical Education Teachers' positive attitudes towards inclusion of students with disabilities in physical education activities, based on the Formative program "Sport is for everyone", which contributed to changing the attitude towards students' disability as a problem to approach it as a challenge (opportunity) in the involvement in PE activities; improving the desire of students with disabilities to participate in PE activities together with non-disabled.

The theoretical significance of the research: the contribution to the development of the concepts and theories of inclusion in relation to PE; identification of factors and indicators of inclusive education in relation with PE; contributions to the theory of education by exploring the concept of inclusive physical education based on social, pedagogical and psychological foundations.

The practical value of the research: the strategies, principles and methods of increasing the PE teachers' positive attitudes and improving inclusion process may serve as incentive for reviewing education policies of fighting rejection towards students with disabilities; the components of the Pedagogical Model, based on formative program "Sport is for everyone", can be applied in developing a plan for increasing inclusion of disabled students in all PE class in the schools of Arab sector Israel.

Implementation of the scientific results: through practical activities with teachers and students from 120 elementary schools in Northern Israel.

ADNOTARE

SHAMA Einas, Dezvoltarea atitudinii pozitive față de incluziunea copiilor cu dizabilități la profesorii de educație fizică, teză de doctor în științe ale educației, Chișinău, 2024

Structura tezei: Adnotări, acronime, Introducere, 3 capitole, 160 pagini text de bază, 20 tabele, 21 figuri, Concluzii generale și recomandări, Bibliografie (208 titluri), 6 anexe. Rezultatele obținute sunt reflectate în 9 publicații științifice.

Cuvinte cheie: atitudini pozitive, educație fizică, incluziune, elevi cu dizabilități, integrare, educație incluzivă, motivații, stereotip social, copii cu nevoi speciale.

Domeniul cercetării: Teoria generală a educației.

Scopul cercetării: constă în elaborarea și validarea Modelului Pedagogic pentru dezvoltarea atitudinilor pozitive ale profesorilor de educație fizică față de incluziunea elevilor cu dizabilități în activități de educație fizică pentru eficientizarea educației acestora.

Obiectivele cercetării: explorarea conceptului și dimensiunilor atitudinilor profesorilor față de incluziune; analiza evoluției și elucidarea conceptelor de incluziune în sistemul de învățământ și conexiunilor dintre incluziune și educația fizică (EF); elaborarea cadrului teoretic și praxiologic de includere a elevilor cu dizabilități în lecțiile de EF împreună cu elevii fără dizabilități; examinarea complexității corelațiilor dintre atitudinile profesorilor de EF și variabilele: participarea la un curs academic, experiența de lucru cu studenți cu dizabilități, genul; validarea Modelului Pedagogic pentru dezvoltarea atitudinilor pozitive ale profesorilor de EF față de incluziunea elevilor cu dizabilități în activitățile de EF pentru a le eficientiza educația.

Noutatea științifică și originalitatea cercetării: au fost actualizate conceptele de incluziune, mediu școlar incluziv, atitudini pozitive ale profesorilor de educație fizică; a contribuit la schimbarea paradigmei tradiționale conform căreia sportul este un subiect neimportant pentru elevii cu dizabilități, pentru a-l aborda ca element cheie de includere în lecțiile de educație fizică; a fost validat *Modelul Pedagogic pentru dezvoltarea atitudinilor pozitive ale profesorilor de educație fizică față de incluziunea elevilor cu dizabilități în activitățile de educație fizică* pentru eficientizarea educației acestora.

Rezultatele științifice obținute în cercetare: identificarea și validarea reperelor teoretice și metodologice ale Modelului Pedagogic pentru dezvoltarea atitudinilor pozitive ale profesorilor de educație fizică față de incluziunea elevilor cu dizabilități în activitățile de educație fizică, pe baza programului formativ „Sportul este pentru toți”, care a contribuit la schimbarea atitudinii față de dizabilitatea elevilor ca problemă spre abordarea ca o provocare (oportunitate) în implicarea în activitățile de EF; îmbunătățirea motivației elevilor cu dizabilități de a participa la activități de EF împreună cu persoanele fără dizabilități.

Semnificația teoretică a cercetării: contribuție științifică la dezvoltarea conceptelor și teoriilor incluziunii în raport cu EF; identificarea factorilor și indicatorilor educației incluzive în relație cu EF; contribuții la dezvoltarea teoriei educației prin explorarea conceptului de educație fizică incluzivă bazată pe fundamente sociale, pedagogice și psihologice.

Valoarea practică a cercetării: strategiile, principiile și metodele de creștere a atitudinilor pozitive ale profesorilor de educație fizică și de îmbunătățire a procesului de incluziune pot servi drept stimulent pentru revizuirea politicilor educaționale de combatere a respingerii față de elevii cu dizabilități; componentele Modelului Pedagogic, în baza programului formativ „Sportul este pentru toți”, pot fi aplicate în elaborarea unui plan de sporire a incluziunii elevilor cu dizabilități la toate lecțiile de educație fizică în școlile din sectorul arab Israel.

Implementarea rezultatelor științifice: prin activități practice cu profesori și elevi din 120 de școli elementare din nordul Israelului.

SHAMA EINAS

**DEVELOPING POSITIVE ATTITUDES OF PHYSICAL
EDUCATION TEACHERS TOWARDS INCLUSION
OF CHILDREN WITH DISABILITIES**

Specialty 531.01 – General Theory of Education

Abstract of the Doctoral Thesis in Educational Sciences

Approved for publishing: 21.02.2024
Offset paper. Offset printing.
Printing sheets: 2,2

Paper size 60×84 1/16
No. of copies 50 ex.
Order no. /2024

Editorial-Polygraphic Center of the Moldova State University
Str.A.Mateevici, 60, Chisinau, MD-2009