Research Article

The Impact of the Homework in Mathematics on Learning Style of Arab Primary School Students in Israel*

Yousef Mathkal Abd ALGANI [1] **Younis Fareed Abu ALHAIJA** [2]

Abstract

The aim of the current research is to examine the Impact of the Homework in Mathematics on Learning Style of Arab Primary School Students in Israel as the issue of homework is an old problem despite successive suggestions and recommendations. The Significance of research stems from the importance of the homework in mathematics that accompanies the educational process, through which students are assisted in enhancing their' self-learning abilities to develop their intellectual abilities, and their creative and critical thinking. The writer depends on the qualitative method for examining. The research sample included 24 primary school students from Arab schools present in Israel to examine their tendencies towards homework in mathematics and its impact on students ' learning style. The results included two main groups: the first: social impact and the second: teacher's policy in dealing with homework.

Keywords: Homework in mathematics, learning style, primary school

1. INTRODUCTION

Homework is a method of applying and practicing the material taught in the classroom and reviewing the information and materials taken in the school as well as it is a basis in the development of students' self-study abilities. Homework is a very important issue in the field of education development and evaluation, which has preoccupied scientists throughout the ages, especially with regard to the quantity, quality, level of difficulty, and developmental stage in which the homework is given.

Regardless of the level of thinking skills that are based on homework. Homework can turn into a burden on the learning process unless teachers set their goals and take into accounts students' abilities, assimilation, and stages of their intellectual and mental development, the level of homework can negatively affect the student's interaction with it, especially in mathematics. It is important to note that homework is basic in the development of the student's self-learning abilities as modern pedagogical philosophy focuses on the learner as the center of the educational process, and the teacher must pay attention to the students and their individual differences (Ruben-Fernandez-Alonso, 2015).

The researcher experienced that there is a clear problem in teaching mathematics and his notes depends on following-up the problems that impede the educational process for the students in the primary stage, which are the problems that hampers the process of teaching mathematics in this stage and the lack of practicing and handling. The best way for a student to learn mathematics is to practice it frequently and to solve the questions and the examples relating to educational material.

Received Date: 03/01/2022 **Accepted Date:** 17/03/2022 **Publication Language:** English

*__To cite this article:__ Algani, Y.,M., & Alhaija, Y.R.A. (2022). The impact of the homework in mathematics on learning style of Arab primary school students in Israel. *International e-Journal of Educational Studies (IEJES), 6* (11), 45-55. https://doi.org/10.31458/iejes.1053053

[1] *Sakhnin College, Department of Mathematics, Israel, yosefabdalgani@gmail.com*

[2] *Sakhnin College, Department of Education, Academic College for Teacher Education, Israel, aboelh5@gmail.com*

* *Corresponding Author yosefabdalgani@gmail.com*

The researcher also noted that the majority of students neglect and did not perform the exercises and homework given to them by the teacher at the end of each lesson, depriving them of an important experience in handling and solving educational materials and performing associated tasks. Therefore, the researcher found it is necessary to study the problem in terms of its causes and consequences of the subject of mathematics for elementary school students in relation to the Arab community in Israel. Emily (2016) conducted a study aimed to exploring students' perception for homework and their performance in prep schools in Connecticut, USA. The results of her study showed that students have a positive trend and that their grades improved in subjects where they were given home work. Depending on the variables of gender and general level in mathematics, the results also showed a relationship between student trends and homework use. There was also a relationship between computer use, classroom study, self-esteem and lack of homework.

A study Conducted by Cooper (2006) aimed to identify the level of students' performance in doing homework in mathematics, science, and English and its relation to some personal factors and educational practices in Spain. The results of the study showed that there is no linear relationship between the lack of homework and student achievement, and the results also showed that spending an hour a day doing homework is a reasonable and time-efficient period. Furthermore, the results showed that the amount and frequency of homework are connected with the students' academic achievements (Misslis, 2009).

The study which was done by Novak and Lynott (2015) aims to investigate the relationship between trends towards certain homework and a range of variables such as the time a student takes to complete homework, the importance of mathematics, science, and languages, the concept of self, and the positive impact for mathematics, science and languages. One of the results of the study was the relationship between the positive effect of solving home work of mathematics, science, languages and the concept of self-esteem. Whenever there is encouragement by a teacher urging his students to make maximum effort to solve mathematical problems, this is accompanied by a great sense of self-esteem and self-perception as the results showed that the given homework was related to valuable ethics and the positive impact of mathematics, science and English, but not related to self-concept in these subjects (Hong, Mason, Peng, & Lee, 2015).

Regarding the relationship between times one spent in doing homework, the importance of English, self-concept, and the positive influence of language, the results showed no correlation (Tas, Sungur-Vural, & Öztekin, 2014). The study conducted by Sarah Quad aims to study the relationship between homework and educational attainment among secondary school students. The results indicated that homework had no apparent effect on student's achievement and the parents' contributions were positive and clear in these results (Kitsantas, Cheema & Ware, 2011).

The study by Jennifer M. Hayward aims to determine the effect of homework on students' learning abilities in languages and English, and to investigate how homework is performed, and how it specifically affects students in correcting errors, understanding the material, language proficiency, and vocabulary handling. One of the most important findings of this study was that there are many conclusions that can be appear by com-paring the marks before and after the intervention - in correcting errors.

1.1. Importance of Homework

Homework connects many active aspects of the learning process that's parents, students and teachers, which serve different purposes such as improving student performance and thinking development as well as solve the problems that certainly affect the class regarding discussing and solving homework and checking student's understanding of the material.

Homework involves different levels of challenge and different types of questions, ranging from simple tasks to the most complex ones; thus, this demonstrates the importance of research in homework (Burriss, Kathleen & Snead, 2017). Therefore, learning is a personal effort through which

an individual can achieve specific goals, and educational work is exciting and stimulating. The learner strength personality and self-activity as well as the appropriate atmosphere and abilities that help the learner to succeed are the result of the efforts he makes in learning and dissolving mathematics.

The importance of research stems from the importance of the homework accompanying the educational process, through which students are assisted in:

- ✓ Enhance students ' self-learning abilities.
- ✓ Improve academic level and scientific achievement.
- ✓ Accomplish the tasks associated with the objectives of the lesson, and give them the opportunity to practice the language outside the learning class.
- ✓ Highlight the individual differences between students.
- ✓ Identify and follow up the reasons why students neglect mathematic homework.

1.2. Develop Students' Mental Abilities through Homework

Teaching mathematics depends mainly on the student's research and deducing abilities of theories and try to apply them, and not through the indoctrination of the material as the process of indoctrination negatively affects the student's learning style to be a ritual learning style, which in turn leads to educational difficulties and fear of mathematics. The process of research learning in mathematics and giving the student space for research and exploration will positively affect the students' mental abilities, and it will also develop the students' creative and critical thinking. The decision makers of the Ministry of Education and researchers contributed to the construct research and exploration programs to develop students' self-learning abilities through research and exploration, and the listed tasks developed by Laiken Rosa from the University of Haifa, which stressed on learning according to Top down model, that based on Self- Regulated Learning to develop the students explorative learning style.

The teacher must be aware of the importance of the homework in mathematics that develop the conceptual learning style

- Students must commit to a specific time to complete their studies and solve the exercises.
- A base for collaboration between students should be created to give them a sense of community responsibility (Homg, Min, & Yun, 2011; Trautwein & Ludtke, 2009):
- Students should be given an opportunity to revise what they have learned in the class.
- Students must acquire a method of self-study and learning through homework and its diversity.
- Students should have the opportunity to work according to their speed, and low-level children should be given the opportunity to work according to their abilities at home and receive more help.
- Students should be given space to practice mathematics at school and home by giving different kind of homework and tasks to get the concept of mathematics.
- During the semester students should be more dependent on practicing the material, meanings, the readable understanding, solving the exercises and introduce individual homework in order to make progress according to their abilities.
- The student must be allowed to develop and free himself from the dominant point of view, which considers that learning does not mean sitting in a group to receive knowledge. Learning is something a learner can do by himself and for himself.

The teacher should make sure that the homework that has no specific goals and that does not take into account the mental abilities of the students and encourages the ritual of learning style of the students, should be given (Algani, 2019).

1.3. The Role of Parents

Both parents and teachers agree on the importance of homework in order to check if students have got the material they studied at school. It is important to mention that the benefits of homework go beyond simply focusing on practicing new skills.

In research conducted by the Brown Center Institute on the contribution of homework to the learning process and the importance of homework from a parent's point of view, it was found that 15% indicated that homework pressure on their children was positive, 46% said it was good, 30% rated it acceptable, and the remaining 9% declared the negative impact of homework pressure on their children. In the same context, the researchers Snead and Burris (2016), in their article, declared the importance of parental involvement in their children's homework and their contributions to increase student's motivation to learn and reach higher educational attainment (Trautwein & Lüdtke, 2009; Snead & Burris, 2016). It showed great importance among students in secondary school but not in elementary school. Algani (2019) also pointed out that parents and community pressure in the implementation of mathematical assignments develop ritual learning style of the students, and the parents that encourage their children to do homework in mathematics in positive way support for the development of conceptual learning style.

1.4. Educational Standards for Homework by the Teacher

Homework has many goals, including goals set in part by mastering research learning skills and not to make students rely on the indoctrination of the learning material and the need to understand the subject and ensure that students review the subject and topics required through research and develop self-learning abilities. It is used as a bench-mark for measuring students' progress (Snead & Burris, 2016).

According to Snead and Burris (2016), homework was introduced in European schools in the 18th century; in order to expand students' knowledge, develop thinking skills and increase learning and motivation to learn. Their study aims to understand the view of the primary school students in the Arab community regarding homework, as teachers are central axis in the learning process. The research sample consisted of 118 teachers from various primary schools. The research aims to examine students' perceptions and thoughts towards homework. The research results showed many educational and non-educational reasons for doing homework from the teacher's point of view, including classroom material practice, motivation to learn, reviewing the taught material, taking responsibility, and self-promotion of students. The research indicated a difference in the time spent in dealing with homework from teacher's point of view. Also, it identified the problem of involving students in vague, random and irresponsible homework that reduces the effectiveness of education. Moreover, the research has shown inaccuracies in giving homework that negatively affect the student learning process, and inaccurate motivations of teachers to give homework in mathematics, and develop conceptual learning style among the students.

The conclusion of the research that mentioned (Tas, Sungur-Vural, & Öztekin, 2014; Shima, Farzad, & Hasan, 2012).

Homework must be based on proper foundations, educational standards, specific goals, and of course take into account the student's mental abilities and the educational stage that the student is going through. It mainly relies on research to develop self-learning abilities as well as the teacher has to assess the students' level through tasks. Failure to assess students' level may harm the educational process, in addition to that tasks that do not take into account the student's abilities and educational stage may harm the student's learning style to be a ritual learning style. Otherwise, it may harm the student and pre-vent him from the scientific progress in the material and decline in the practice of mathematics and mastery of concepts and fundamentals later and in the long term (Astleitner, 2007; Shima, Farzad, & Hasan, 2012).

It should be noted that, despite the criteria on which homework should be based, some problems can be identified and understood:

- Some students are late in performing their tasks.
- Some homework is incomplete, not done as required, or inaccurate.
- Homework is automatically and literally copied from another student's notebook and solve unwanted exercises in the task
- The student failed to solve homework at all.

That encourage the students to develop the ritual learning style, and many problems in mathematics in the future.

1.5. Possible Factors that Led to the Problem

Some possible factors that led to the problem are the lack of internal conditions suitable for doing the homework. This may also be due to the fact that the teacher has given the task without paying attention to its wording or suitability to the students, or not giving students any instructions about homework in the classroom (Snead & Burris, 2016) As well as the tasks and mental abilities of students do not fit the educational stage and are not targeted, nor do they provoke students to research and doing mathematical exploration.

Studies were done by Trautwein and Lüdtke (2009), show a positive relationship between the target homework, math and language. Students who did their homework scored better in their assessment than those who did not do their homework. However, these studies have also shown that there is no relationship between the allotted time for homework and student achievement. This research helped verify that although homework can be a valuable learning tool, but spending more time on daily homework is not necessarily beneficial (Trautwein & Lüdtke, 2009).

While researching on the types and standards of effective homework, the researcher found that collaboration between students was important in developing mathematical thinking. Students should understand the difference between asking for help from an-other student and simply asking for answers. If the main goal is to learn mathematics, homework is not necessarily required (Snead & Burris, 2016) and the corporation be-tween the pupils develop the conceptual learning style (Algani, 2019).

1.6. Some Problems Related to Homework

The following are numbers of patterns and behaviors that indicate that students fail to do their homework properly:

- ✓ Neglect or delay in carrying out their homework.
- ✓ Partial or inaccurate homework.
- ✓ Copying homework from classmates (cheating on their performance).
- ✓ Work on exercises that are not required.
- ✓ Not doing homework at all (Sharp, Keys & Benefield, 2007).

Many researchers have claimed that the impact of undirected homework tasks and those tasks that do not meet students 'different levels in math, increases fear and anxiety among math students as well as develop behaviors that lead to problems in doing their homework, and decreases students' self-confidence and self-ability. Homework also increases motivation for the subject if it is well organized, suitable for different students' levels in the same class and oriented towards learning mathematics (Kathleen et al., 2017).

We mention some of the factors that negatively affect the materials are the incubating social environment:

1.6.1. Parents

The parent plays an important role in develop their children learning style (Algani & Eshan, 2020), the main role of parents is to give their children a sense of security and the high expectations, which stimulates students to increase their efforts towards learning the subject. Monitoring and controlling of children, by their parents, while doing their homework does not improve their results; the more parents notice and pressure their children while doing homework, the more negative effects will be. The role of parents is in supporting their children to develop and increase their motivation to focus better when performing their homework. They should encourage them to insist on success rather than pressure them. Parents should encourage their children daily, and try to realize the importance of learning and practice homework. School administration must respect parents for the benefit of children (Walk & Lassak, 2017).

1.6.2. Teacher

Researches are conducted in Swedish schools on teachers playing a crucial role in the teaching and learning process; they are the main source for giving homework. Teachers' perceptions and experiences regarding the concept of homework and the challenges they face in developing learning strategies and homework tasks that they are preparing to meet their abilities within the classroom will be discussed. Teachers should believe in the importance of repetition homework to enhance students ' learning, develop their mental and educational abilities, equip them with educational and intellectual skills, and enhance knowledge through repetition; teachers consider the diversity of homework is important. The contribution of the teacher in helping children overcomes their problems when dealing with homework can be done by designing homework that will fit the intellectual levels of students and enrich their scientific agenda to develop the pupils their conceptual learning (Gecer & Dag, 2012).

Homework is a method of applying and practicing the material taught in the classroom and reviewing the information and materials obtained in the school as a basis in the development of students' self-study abilities. Homework is a very important issue in the field of education development and evaluation, which have occupied scientists over the ages, especially with regard to the quantity, quality, level of difficulty, and develop-mental stage in which the homework is given. Regardless of the level of thinking skills that are based on homework. It can turn into a burden on the learning process unless teachers set their goals and take into account students ' abilities, assimilation, and stages of intellectual and mental development, the level of homework can negatively affect the student's interaction with it, especially in mathematics.

It is important that homework is fundamental in the development of student's self-learning abilities as modern pedagogical philosophy focuses on the learner as the center of the educational process, and the teacher must pay attention to the student's individual differences (Ruben Fernandez-Alonso, 2015). The researcher considers that it is necessary to study the impact of homework on the study patterns of primary school students. The importance of this research stems from the importance of mathematics and its impact on the whole community, and teachers must take into account the orientation and desires of students and make teaching an exciting, participatory and collaborative process. This research aims to discover the impact of homework on study patterns in primary school students.

From the proposed problem above, we can derive the following search question:

What is the impact of the homework in mathematics on learning style of Arab Primary school students in Israel?

The importance of research derives from the importance of the mathematics homework accompanying the educational process, through which students are assisted in. This enhances students' self-learning abilities, develop their intellectual abilities and develop their creative and

critical thinking. This also improve students' academic level and their scientific achievement. And to accomplish the tasks associated with the objectives of the lesson, and give them the opportunity to practice the language outside of class. Also to highlight the individual differences between students, and to identify the reasons of neglecting homework in mathematics and follow up all the reasons.

2. METHODOLOGY

The researcher based his research in the qualitative model of the current study, and give organized interviews consists of a set of questions that can be changed according to the person interviewed. The purpose of the interview is to try to understand the set of beliefs and motivations and implements of the interviewee (Xu, Fan & Du, 2017), review the research community, research tools, and interview analysis process.

2.1. Qualitative Model

This study was based on the qualitative model. This model posits that the best way to investigate a phenomenon is to talk and listen to the people in their natural environment. The researcher does not try to control or limit the variables of the study. The qualitative approach is based on the assumption that events, information and thoughts cannot be expressed quantitatively, and can be reliably raised only through narrative. Narrative is explanatory and selective tools, which people can perceive the world and their experiences through, interpret and give them meaning (Zare, Cox, Murphy & Bayas, 2017).

2.2. Study Sample

The study involved 24 Arab students in the first semester in academic year 2020/2021 from different Arab primary schools in Israel, the average age of those investigated were 10 years (between the ages of 8 and 12 years). Their educational attainment in mathematics was above the 90's according to their reports.

2.3. Study Tool

In this study, the researcher tries to reveal the Impact of the Homework in Mathematics on Learning Style of Arab Primary School Students in Israel. The data was collected through semi-organized semi-structured interviews; which was conducted with both researchers and students in ZOOM platform after talking with their parents. Each interview lasted between half an hour to fifty minutes. Before the interview started, all students received brief information about the subject of the interview and were asked to agree, as well as they were told not to revel his/ her identity as privacy and confidentiality of the research. Acceptance of the agreement was valid with parents and students. Students were asked to answer questions of personal information (age, city, parent education, secondary school, etc.) during the interview. Along with the personal questions used a narrative interview technique, allowing the publication of stories and scenarios which may explain students' experience with homework in mathematics and its impact on the development of learning styles.

2.4. Data Analysis

Written interviews were analyzed and the results analyzed according to them. The texts were analyzed using the guidelines for content analysis in the research outline the text was read in a continuous manner followed by data analysis and identification of units and categories that support the subjects.

2.5. Interview Analysis Method

The concentration of the data analysis was done by means of information reduction process, in order to assist the researcher in presenting a focused analysis leading to broader conclusions of the study results. According to the detailed procedures below:

- ✓ At the first stage, each category included a topic, directly addressing the interviewees. In the end, a system of broad categories of concepts was created by the topics raised in the interviews.
- ✓ In the second stage, the goal was to get a complete picture of the data collected. The interview sections sorted by broad categories which categorized under the same category in the different interviews, only at the stage of completion of the data collection, it was possible to see a complete picture of the data, seeing it has an additional importance beyond the sub-themes. At this point, the question is what kind of relationships can be seen in the data?
- ✓ In the third stage, the stage of concentrated analysis, the information was compiled into an explanation of the main category. Then the interviews were classified according to these categories, and the subcategories of the patterns were divided into additional categories.

3. RESULTS AND DISCUSSION

This section presents the results of the interviews in an attempt to determine the Impact of the Homework in Mathematics on Learning Style of Arab Primary School Students in Israel. The research results refer to two main categories: the first is based on the social aspect represented by parent's impact, and the second one based on educational side represented by Teacher. In addition to that the challenges faced by the participants were also presented according to their perception. (All subscriber names are not real).

Social aspect: the interviews showed the impact of the social aspect and its practices on the performance of the homework, and I mention some of them:

3.1. Social Impact on Student Learning Style

The primary school is a sensitive stage in the acquisition of math skills and through their understanding of the fundamentals of mathematics, students build an attitude to-wards it and regulate his/her behavior towards it, through the following subsections, I will introduce the contributing factors in determining the position of students from the homework in mathematics:

In this research, it was found that there is an influence of the family on the learning style of students, where it was found that the parents increase motivation to meditate with the home work and solve it radically and fundamentally and not to be reckless.

"Soha" started talking and said "she will go to the mall and watch a movie if she does her homework well at the end of the week". And so "Narmeen" answered " her mother will al-low her to visit her friends if she does her homework well", she continued, "Sawsan will forbid me from the using the phone and forces me to close Facebook if I don't do the homework properly", "I must get 100 in mathematics exam, my parents will be angry if I don't get it, I must solve all the questions because the parent will be satisfied", in the Arab society, parents have the supreme authority that believes in education as a radical solution.

3.2. The Impact of the Teacher on the Student's Learning Style

The teacher has a great influence on the development of the student's learning style. The teacher who does not give research and exploration tasks that suit students' mental abilities and do not take into account the educational stage causes students to have a ritual teaching method. The teacher has to give homework, explain it in the class, answer students' queries and follow the students while doing homework. The teacher also has to take into account students mental abilities and educational level, as Qamar said "the teacher asks us about the answers of the homework each class so, we have to solve it correctly" while Deena answered "the teacher explains the homework, and give us the chance to ask about it so, it becomes easy to solve".

Noura said “the teacher puts the questions of the exams from the homework, so if we keep it by heart, then we will get full mark, even if we don’t understand the material. Finally, we care about our marks!” Narmeen said “because the teacher punishes us if we don’t do the homework and deducts from our marks”. As Sawsan said, “the teacher phones my parents if I do not do my homework, so I had to solve it, and sometimes I copied it from my friends”, Reem added “all teachers know what we do!”, and she added, “the teacher solve the homework without knowing our solutions, and the exam questions from the homework and we must solve according to his solutions without under-stand our mistakes”.

The researchers discusses and answer the question of research and provide data results with discussion, in addition to the implications of this study and suggestions for further studies will end the chapter. This research exam the Impact of the Homework in Mathematics on Learning Style of Arab Primary School Students in Israel.

Homework has a great importance and parents have a great influence in doing it correctly; the parents who support their children and motivate them in a positive way have more tendencies to complete them properly. This is similar to the previous scientific research (Walk & Lassak, 2017) which pointed out that the parents have a radical role in increasing motivation among students to complete homework, the role of parents is to support their children to develop and increase their motivation to focus better while performing their homework.

They should encourage them to insist success rather than pressure them. Parents should encourage their children on daily, and try to absorb the importance of learning and homework practice. The school administration must respect parents for the benefit of children (Walk & Lassak, 2017) and this is what we have seen from the students ' answers about the role of parents in their motivation to solve the homework properly and play the basic role in the learning style among the pupils. If the parents pressure their child, they develop child ritual learning and they care just in grads and didn't care in understanding the mathematics material. This causes mathematics anxiety and mathematics difficult in the future. From the other side, if the parents support their child in solving the home work, their children develop conceptual learning style and they over-come their mathematical difficulty and they built a strong base in mathematics in the future.

During the interviews, the pupils pointed out the importance of teacher's role in the positive tendencies in doing homework as the teacher who performs his duty makes the tendencies of the students more positive towards the homework. The teacher who ex-plains the homework in the class and gives the students chance to ask questions, are the one in whose class students do their homework more seriously.

Alexander Gesser pointed out in his scientific paper that the teacher's contribution is to help children to overcome their problems when dealing with homework by designing it to suits the intellectual levels of the student and enriching their scientific agenda in terms of explaining the homework; he must explain it in details and give them the chance to discuss and answer it (Gecer & Dag, 2012), and the role of the teacher is very important in developing the learning style of the students. If the teacher designs the assignments that suits the intellectual levels of the student and thus enrich their scientific agenda the pupil develops a conceptual learning style. And if the teacher just cares about the grades the student develops a ritual learning style.

4. CONCLUSION

This research is conducted in order to showed the importance of shaping students' learning styles to dealing with homework. If the teacher who does not develop the self-learning abilities of students and their mathematics' research through homework, he will make the students part of the system of indoctrination of the educational material without understanding it as it has to be.

• Important factors to consider: the positive parental support for their children; time space and support provided for the completion of homework.

• Teacher's support to the students in a positive form and his explanation and examination of homework. Besides, the positive reinforcement for his students. This is done by providing the appropriate conditions for them which allows them to correct the homework. The teacher has to be an observer; his attention makes the students realize the importance of homework and makes them more careful.

• Teacher supports students to work in groups and to build a positive and supportive learning environment, because he realizes the impact of colleagues on each other.

• Social and educational support plays an important role in shaping the students' learning style, through educational research; we build a generation of students capable of self-learning and build a solid scientific foundation through the development of creative and critical thinking.

Current research limits: study sample size, the following research was based on inter-views with 24 students, which identified groups and classifications, as well as the re-search does not address the impact of colleagues or the impact of the classroom environment. Moreover, the time spent in the implementation of the homework or the levels of thinking touched on the homework and its impact on student tendencies were also not covered in the present study.

Suggestions for future research: according to the results of the current research, there is a need to conduct further research that will address influence of colleagues on the students' tendencies to carry out the homework, as well as the impact of the classroom environment. In addition to the effect of the homework on students' achievement, or the effect of the homework on student achievement at low Bloom's levels of knowledge, the effect of gender on students ' tendencies to carry out the homework can also be investigated further. The researcher has developed a cycle for the relationship of the homework in mathematics to the learning style, (see fig. 1). It should be noted that the homework that do not fit the level of the material and the mental level of the students and the pressure of the parents leads the students to the ritual learning style and this leads to fear of the educational topic and to difficulties in the educational topic as following:

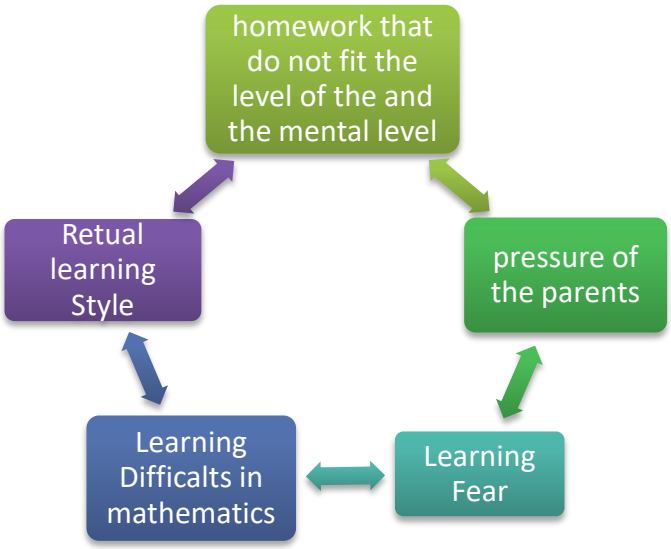

Figure 1. Homework cycle

5. REFERENCES

Algani, Y. (2019). Innovative ways to weach wathematics: Are they employed in schools?, *Journal of Computer and Education Research (JCER), 7*(14), 496-514.

Algani, Y. & Eshan, J. (2020). The effectiveness of a program for developing the skills of mathematical thinking for first year preparatory pupils. *Journal of Gifted Education and Creativity, 7*(2), 41-51.

Astleitner, H. (2007). Theory: Designing task-based learning sequences. A categorical model of task attributes. In H. Astleit-ner&H.-J. Herber (Eds.), *Task- and standard-based learning: An instructional psychology perspective*. Frankfurt am Main, Germany: Lang. 9-34.

Burriss, G., Kathleen, D. & Snead. (2017). Middle school students' perceptions regarding the motivation and effectiveness of Homework. *School Community Journal, 27*(2).

Cooper. (2006). Does homework improve academic achievement? A synthesis of research, 1987-2003. *Review of Educational Research, 76*(1), 1–62.

Gecer A., & Dag F. (2012). A blended learning experience. *Theory and Practice, 12*(1), 438–442.

Hong ,E. Mason, Y. & Peng, N. Lee. (2015). Effects of homework motivation and worry anxiety on homework achievement in mathematics and english. *Educational Research and Evaluation, 21*(7), 491-514.

Walk, L. & Lassak, M. (2017). Making homework matter to students. *Mathematics Teaching in the Middle School, 22*(9), 546-553.

Kathleen, G. & Burris. (2016). Middle school teachers' perceptions regarding the motivation and effectiveness of homework. J*ournal of Inquiry and Action in Education, 7*(2), 62-80.

Kitsantas, A., Cheema, J., & Ware, W. (2011). Mathematics achievement: The role of homework and self-efficacy beliefs. *Journal of Advanced Academics, 22* (2), 310-339.

Misslis, O. (2009). The hidden values of homework culture. From a lecture he checked homework for homework. Israel.

Novak, B., Francis, J., & Lynott. (2015). Homework in physical education: Benefits and implementation. *A Journal for Physical and Sport Educators, 28*(1), 22-26.

Ruben-Fernandez-Alonso. (2015). Adolescents' homework performance in mathematics and science: personal factors and teaching practices. *Journal of Educational Psychology,* Advance online publication.

Sharp, W. Keys, P., & Benefield. (2007). *Recent research on homework: an annotated bibliography*. Upton Park, Slough, Berkshire: National Foundation for Educational Research.

Shima, M., Farzad, R., & Hasan, A. (2012). The role of mathematical homework and prior knowledge on the relationship between students' mathematical performance, cognitive style and working memory capacity. *Electronic Journal of Research in Educational Psychology, 10* (3), 1223-1248.

Trautwein, O. & Lüdtke, O. (2009). Predicting homework motivation and homework effort in six school subjects: The role of person and family characteristics, classroom factors, and school track. *Learning and Instruction*, 19, 243–258.

Tas, Y., Sungur-Vural, S. & Öztekin, C. (2014). A study of science teachers' homework practices. *Research in Education*, 91, 45-64.

Xu, J., Fan, X., & Du, J. (2017). Homework emotion regulation scale: confirming the factor structure with high school students. *Journal of Psychoeducational Assessment, 35* (4), 437-441.

Zare, R. N., Cox, C. T., Murphy, K., & Bayas, C. (2017). Implementation of peer-reviewed homework assignments. *Journal of College Science Teaching, 46* (3), 40-46.