



Two Centers for the Gifted, One Moon - The Program

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Article abstract

This article addresses a unique program involving international collaboration between gifted students from Israel and Croatia. The COVID-19 pandemic opened an opportunity for effective synchronous communication that enabled an unmediated connection between the participants. During the program the children researched the moon from various aspects: scientific, emotional-behavioral and artistic, via theater and creative writing. There were 35 gifted students, 20 from Israel and 15 from Croatia. Five teachers of gifted students, an educational counselor, an educational psychologist and the writers of this article participated in the program and provided the students with academic accompaniment in giftedness and creativity.

Two Centers for the Gifted, One Moon - The Program

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Abstract

This article addresses a unique program involving international collaboration between gifted students from Israel and Croatia. The COVID-19 pandemic opened an opportunity for effective synchronous communication that enabled an unmediated connection between the participants. During the program the children researched the moon from various aspects: scientific, emotional-behavioral and artistic, via theater and creative writing. There were 35 gifted students, 20 from Israel and 15 from Croatia. Five teachers of gifted students, an educational counselor, an educational psychologist and the writers of this article participated in the program and provided the students with academic accompaniment in giftedness and creativity.

Keywords: Gifted students; international educational partnership; Covid-19 pandemic; international collaboration; effective communication.

Introduction

This article addresses a unique program involving international collaboration between gifted students from the "Hofim" center in Emek Heffer in Israel and gifted students from the "Wind at the Back" center in Croatia.

The working relations between Israel and Croatia were created following a request from the directors of the center in Croatia asking the writers of this article to provide academic accompaniment. This accompaniment yielded the development of a unique education program for the center's teachers which combined mediated learning experience with creativity.

Following the program, the directors of the gifted program in Croatia came to Israel for a study tour during which they visited the Hofim Center. On their return to Croatia, several attempts were made to promote collaborative learning between the students and the teaching staff from the two countries.

This article reviews the curriculum with the children from both centers. Because of the COVID-19 pandemic, an opportunity arose for effective synchronous communication that enabled an unmediated connection between the participants.

The project began in 2019, when the students were researching and comparing the contents of water in Israel and in Croatia. In 2020 they researched the moon from various aspects: scientific, emotional-behavioral and artistic, via theater and creative writing. There were 35 gifted students, 20 from Israel and 15 from Croatia. Five teachers of gifted students, an educational counselor, an educational psychologist and the writers of this article participated in the program and provided the students with academic accompaniment in giftedness and creativity. The project applied models for

teaching the gifted, including Renzulli's (1978) *Enrichment Triad Model*, learning in conditions of uncertainty, and creative thinking in conjunction with the principles of mediated learning. This article focuses on describing the program in relation to teaching according to models for teaching the gifted and presenting the learning process and its products.

Review

Giftedness

The definition of giftedness has changed over the years. The research literature presents quantitative and qualitative approaches to this definition. The quantitative approach relates to the higher mental abilities of the gifted child – an IQ of 130 and Stanford-Binet IQ test (Ziv, 1990).

The qualitative approach to defining giftedness involves relating to above-average intellectual abilities and emotional, social and environmental components. The degree of interaction between these components determines the level of the individual's functioning and the quality of the realization of that individual's personal potential. Renzulli (1978), for example, gave giftedness an interactive definition known as the "ring model". He identified three clusters of qualities whose degree of overlap determines giftedness: Above-average ability, Creativity, and Task commitment. Furthermore, Tannenbaum (1983) proposed a psychosocial model according to which the gifted also have personality traits and special connections with their surroundings. He claimed that giftedness among students is the potential to reach rare achievements or create exceptional ideas pertaining to ethical, emotional, social and intellectual domains. Gifted children typically have abstract and divergent thinking skills; they are curious, thirsty for knowledge, have exceptional recall, process information rapidly and need to be intellectually challenged (Maddocks, 2020). Although some learners possess these skills, giftedness applies high levels of the abilities to simultaneously combine all the above skills while confronting a complex task or situation.

Tzuriel, Bengio & Kashy-Rosenbaum, (2011) claimed that gifted children have indices of behavior such as motivation to learn, impulse regulation, problem-solving skills and concentration. The combination of these abilities with openness to mediation allows them to realize their potential.

In Israel, gifted students are identified in stages through testing and screening conducted by the Szold Institute at the schools. Students compete the tests in groups. During the test intellectual capabilities predicting academic achievement are observed. This is followed by individual or group admission interviews. Students found to be gifted are then directed to one of two programs: either a class for the gifted in school or a one-day a week enrichment program. In these programs students receive enrichment in various disciplines according to which program they are in, where their particular characteristics are catered to. They are also able to form social ties that are not available in the regular education setting (Ministry of Education, 2019).

In Croatia, first parents or teachers recognize them as children with high cognitive abilities. Before they start the program, they are assessed individually by a psychologist. The test is usually the Naglieri nonverbal ability test or the WISC IV (Wechsler Intelligence Scale for Children). Following the assessment children can participate in the enrichment program for the gifted.

Participation in enrichment programs for gifted students is essential for their optimal and balanced development (Delcourt, Loyd, Cornel & Goldberg, 1994). This participation is an intellectual challenge and also answers emotional and social needs, since students form friendships on the basis of common fields of knowledge. Hence the importance of locating gifted students and providing a suitable intervention.

There are a number of models and educational approaches for teaching gifted students that suit their particular characteristics. These models enable creative and divergent thinking and encourage curiosity. The main models used are Renzulli's (1979) Schoolwide Enrichment Triad Model, learning in conditions of uncertainty, and developing creative thinking while applying the principles of

mediated learning. Renzulli's model (1978) based on the ability of gifted children to explore in depth areas of their interest effectively. The model includes three stages, the first and second stage is intended for all students and the third stage is designed and adapted be gifted students while performing unique thinking abilities.

In the introduction stage, students are introduced to the program and the processes in various fields that are not taught as part of the formal curriculum. This introduction is carried out in diverse ways through discussions and lectures from experts. At the end of this stage, the students each choose the general field they wish to focus their research on. The second, 'in-depth' stage, introduces activities that develop the research skills students will need to use. Usually during this stage thinking skills, creativity and social and emotional skills are developed. The research stage is carried out in small groups. They look into a topic that interests them according to the principles they learned in Stage 2. The production and presentation of a product is considered very important. In this process, students create an original product on the basis of the data they collected. Possible products are: A video, a talk, a dance, and the design of a unique product, etc.

In learning in conditions of uncertainty (Winebrenner, 2020), learners confront a complex problem that reflects a real situation that is not sharply or clearly defined. The work involves description and definition of the key issues, supporting the issues with relevant information, offering hypotheses, gathering different kinds of information, modifying the definition of the problem according to the new information, developing suitable solutions and assessing whether the solutions are acceptable, while relating to ethics and practicality.

Underlying both models are the principles of developing creative thinking which, in this program, is learned in conjunction with mediated learning. Creative thinking is part of the characteristics of gifted students and also part of the strategy for teaching them. Margaliot and Magid (2020) related to the contribution of creative thinking to the professional development of teachers. They mentioned its definitions and the components of creative thinking that can be enhanced through working with students and teachers. The following section is based on their article.

Yamin (2017) defines creativity as the ability to execute a task in a unique, original and relevant manner, taking into account the limitations of the task or the situation. Plucker and Dow (2010) include the importance of the interaction between different perspectives, and the processes and environment in which an individual or group produces an original, useful product in a social setting.

Lubart & Batton (2017) maintain that a lesson that encourages creativity must include both divergent and convergent thinking. The creative process includes detecting the problem, identifying the limitations of actions, being flexible, adapting, raising different ideas, comparing sources of information and exploring contradictory ideas.

Creative teaching must encourage playfulness, imagination, flexibility, openness and dynamism, and cultivate curiosity, investigation, and various mechanisms for developing new ideas (Craft, 2011; Grohman & Szmids, 2013). Cheung and Leung (2013) maintain that teachers must create an atmosphere that encourages student collaboration and active involvement in learning. The creative teacher must encourage students to be self-directed and flexible thinkers, create varied opportunities for learning content, and use an assortment of tools, structures and concepts that will enable students to express themselves in a variety of ways (Craft, 2011).

In order for learning with the above models to be meaningful, it should incorporate experience of mediated learning, which is defined as the quality of the interaction between the learner and the environment (Rosemarin, 1999).

The learning is the outcome of the initiative and guidance of the mediator, who stands between the individual and the world of knowledge and its stimuli and mediates the knowledge, learning strategies and the conduct required for learning. Experience of mediated learning is considered to give the individual the propensity to change following direct interaction with the

stimulus – the knowledge being studied. Every act of mediation between the child and the environment will be characterized by the presence of 12 categories of interaction. The categories that are essential for interpersonal interaction to be considered mediated learning are: mediation for intent and reciprocity, mediation for transcendence and mediation for meaning. In addition, there are categories that do not all have to appear in every interaction, but are essential in the ensemble of contacts between the adult mediator and the child.

The use of these categories fosters the acquisition of tools that prepare the learner for independent learning, effective absorption of information and cognitive and emotional change. Mediation for intent and reciprocity relates to the conscious and intentional nature of the interactions between the mediator and the child. The mediator creates eye contact with the child, adjusts his or her tone of voice and rate of speech, carefully chooses the stimuli (their intensity, frequency, length and medium of presentation), and arranges them in accordance with the child's reactions, his or her alertness and level of motivation (Kozulin & Presseisen, 1995).

With regard to the teaching of gifted students, the mediator will choose content that interests them and has a high level of complexity and abstraction. Transcendence refers to the elements of the mediator's behavior that are not directed at a goal relating to immediate concrete needs, but rather to circumstances and situations that are further away from the 'here and now' in terms of space and time. This mediation acts to expose the mediatee to the connection/continuum between events from the past, the present and the future. This ability to take into account prior knowledge and experiences together with the ability to observe and plan for more and for transfer to the immediate underlies the internal ability to change (Tzuriel, 1998; Rand, 1999). The emphasis is on the mediatees' ability to make idiosyncratic meaning of the studied material, anchored in their cultural background, specific to their set of values, aspirations and needs.

Project description

The project described in this article was conducted in an international setting with teachers and students from two centers for gifted students: the "Wind at the back" Center in Zagreb, Croatia, and the Hofim Center in Emek Haffer, Israel.

The "Wind at the back" Gifted Children's Center was founded in 2012 by a group of enthusiasts. The center is attended by 200 gifted children from kindergarten up to the end of high school (12th grade). The main goal is to help gifted children realize and manifest their potential. The leaders of the Center created a program called "Sparks" through which they enhance the creativity and socio-emotional and cognitive development of the gifted children through workshops.

The Hofim Center in Israel is part of the response provided by the Ministry of Education to gifted students who have passed the screening tests. The Center is attended by 670 students in Grades 3-9 who come for one day of enrichment a week. Learning is multidisciplinary and interdisciplinary with mentors and students. The Center seeks to cultivate students in accordance with the pedagogies suggested by the Ministry's Department for Gifted Students. They intend for the learning environments and conditions that allow for growth, encourage intrinsic motivation and creativity.

International educational programs for gifted students

Most international collaborations are conducted by researchers of giftedness in different countries who share knowledge and conduct joint studies. In the training of teachers of gifted students in Europe and the USA there are number of international collaborations, mainly dealing with research in areas related to giftedness. Research literature mentions a few international programs in which there was collaboration between gifted students from different countries (Smith, 2014). An international educational program for collaboration between young students in which the study of all the contents is fully collaborative is unique.

The international program conducted in the COVID-19 period and its products

This program began in 2019 and extended into 2020. In 2019 there was limited collaboration between 15 students from Israel and 10 students from Croatia. Water was chosen as the joint research topic. The students listened to lectures about it, formulated research questions and conducted research and experimentation on the contents of water in Croatia and in Israel, accompanied by their science teachers. Throughout the year there were two synchronous meetings of the students via computer. The difficulties encountered were to find both a suitable time and a suitable technological platform for these meetings.

The program continued in early 2020, with science and the arts as the chosen topics of joint study. The Hofim Center offered a course entitled “Contact with Croatia” studied within the timetable for arts and science. Children who were interested registered for the courses, which included international collaboration.

At the *Wind at the Back Center* two groups of students were chosen, who, in addition to their studies at the Center, took part in the international program.

The COVID-19 pandemic created a shared situation which actually enabled a breakthrough for the program emotionally, socially and technologically. During the lockdowns in Croatia and in Israel, there was no longer any problem finding times to meet, since the students and the teachers were all free at mutually convenient times. Moreover, Zoom turned out to be a very suitable platform, socially, emotionally and technologically. The students were very happy to strengthen the ties. From this point on the program took a turn and developed under conditions of uncertainty, like an island of sanity and calm that enabled a series of meetings that allowed the students to really get to know each other. This also advanced the learning and the shared preparation of the products we will show later on, as the students and the accompanying team underwent a significant learning process.

There were seven Zoom meetings from March to July 2020. Each meeting began with activities designed to foster a sense of familiarity, belonging and ease among the students, as they shared feelings, hobbies and jokes about the pandemic. After that, the topic of the moon was chosen as the learning focus. The reason for this choice was the sense that we need to create a colony on the moon as a backup option to preserve the human race if its existence should be in danger. (This, of course, was not said to the students, but the intention was to use the teachers’ knowledge and the vacuum on the moon to allow students to imagine, dream and apply the knowledge acquired in the sessions.) In accordance with Renzulli’s ‘introduction’ stage and mediating for transcendence according to mediated learning theory, the students were introduced to various experts and to peer learning. Introduction to the topic of the moon was provided from different perspectives – theater, science, emotion and behavior, music and computer games.

The process described above is shown in Figure 1. introductory

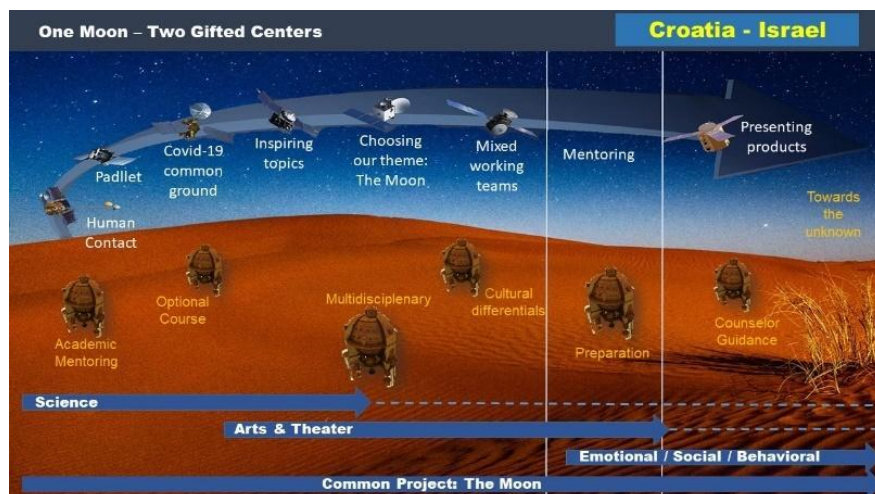


Figure 1: The process undergone by students and staff.

As shown in the figure students were exposed to several aspects of the moon as follows:

Science - illustrating the illusion of the moon, moon photography, how humans can reach the moon, the question of the existence of smells on the moon. Students watched several scientific experiments such as the conditions of the lack of oxygen on the moon, the boiling and swelling of marshmallows, and the telescope operation. Leading this group was Dr. Arie Melamed-Katz.

Acting, theater & creative writing - Led by Oded Guggenheim, students built a shadow theater and acted out issues related to the moon. Led by Bojan Branisavljević, the creative writing group wrote an imaginary story about the moon.

Emotional and social behavior - Learning various myths and stories related to the moon as well as exploring the moon's influences on human behavior and emotions. Leading the group were Ksjenja & Karen.

The entire project was conducted with the participation of experts in teaching gifted children, focusing on the aspect of developing emotional and social skills. One is a psychologist with expertise in giftedness and the other is an educational counselor for gifted children. Because they took an active part in the meetings, in each of the topics developed, emphasis was placed on aspects of social and emotional learning while being aware of the importance of closely accompanying students.

Movies - The moon in movies from 1902 and animated movies about a vacation on the moon (teacher: Droit Lupo-Kozak).

The children were introduced to films made about the moon as well as about making animated films whose theme was the moon.

Peer learning with Anima and the moon in music and games.

As part of the introduction phase, children who volunteered presented their knowledge about the moon. For example, one of the boys presented the moon in a games and music and another girl presented the moon in Anima.

After the introduction to various areas, the children planned to build a base for humankind living on the moon. They planned the journey to the moon, prepared a drawing of the base, took photos of the moon from earth, made a map of the moon to decide where the base should be located. They explored a trajectory for arriving on the moon. The children decided what energy source they should use; they planned and researched how to predict the physiological influences on people and animals. Finally, they planned activities for people on the moon via theater & creative writing. For this project they were divided into 4 main groups: Science; Acting & theater; Creative writing; Emotional & social behavior.

Science

The science group had six students - three from Israel and three from Croatia and their mentor was Dr. Arie Melamed-Katz. Each student made his or her own scientific contribution in order to respond to the various needs, from getting to the moon, settling and living there using existing resources. The students had ongoing contact with the mentor, who asked guiding questions while they were researching the topic in order to reach an outcome. Below are some examples of the students' outputs with the help of their mentor. We planned that in all groups there were teachers from both countries in order to help students to express themselves in English, and overcome language barriers.

The journey to the moon was planned after discussion with the mentor:

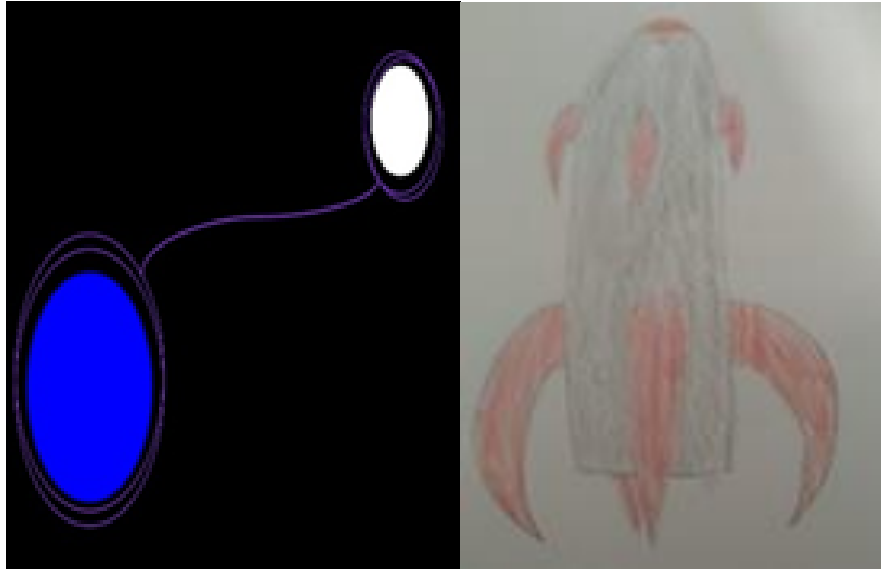


Figure 2: The journey to the moon.



Figure 3: Choosing the location.

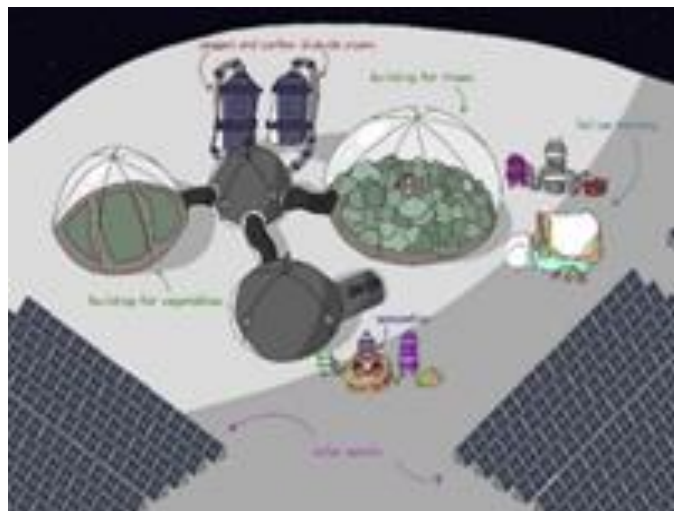


Figure 4: The base.

The students wrote the following:

“The energy sources will be Helium-3 (He-3) and solar panels. We will mine He-3 from the moon ground. A fusion reaction of He-3 and deuterium (from heavy water) produces a lot of energy. The solar panels can be produced on Earth and delivered by the moon spacecraft. The solar panels are going to have a tracking system that follows the sun”.

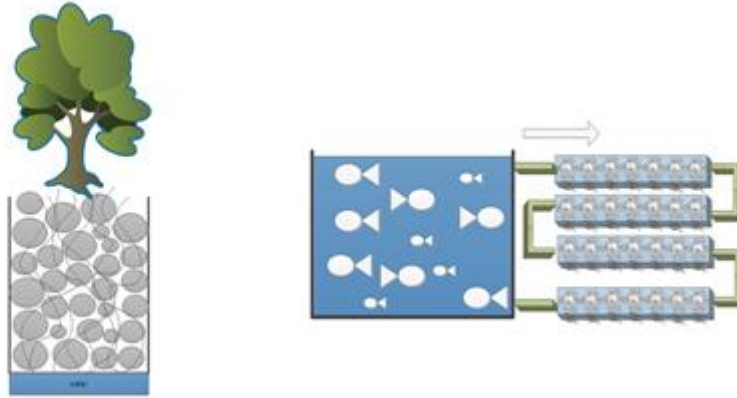


Figure 5: Slides from the presentation - Plants on the moon.

The students wrote the following:

“We will grow the following plants: kale, carrot, tomato, cucumber, pepper, lemon, apple, fig, pomegranate, rye, wheat, mint, and coriander. These plants were chosen because they are healthy, and they need less water than other plants. The trees will be grown in big boxes with stones and water at the bottom. The vegetables and herbs will be grown in an aquaponic system; in which they live with their roots in constantly flowing water. The water comes from a fishpond. The fish waste will fertilize the water and the plants will clean the water for the fish to live in. We will use the following fish types: trout, tilapia and bass. The cereals will be grown in the same way that we grow them on earth”.

Acting, theater & creative writing

The acting and theater group consisted of eight students from Israel. The group was led by mentor, Oded Guggenheim. They filmed themselves creatively in various performances of their own choosing and then made a film on the topic. For example, there was a shadow theater and a role, play with a monologue on ‘Being the prime minister of the moon’.

Figure 5 shows an example of the shadow theater.

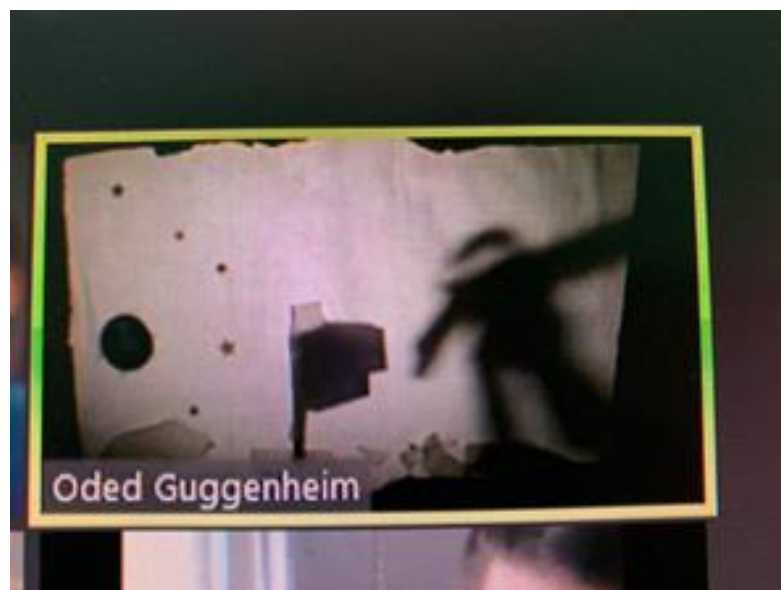


Figure 6: Shadow theater.

Creative writing

Led by Bojan, the group, consisting of four students from Croatia and three from Israel, engaged in writing a story about the moon. They were given an opening paragraph for the story. The story was then passed around among the students from both countries, and each one added another paragraph until the story was completed.

The opening paragraph was as follows:

“It was in the year 2039 that a new era in space exploration began. The first humans have landed on Mars and the foundations of a future colony have started to take shape. But it is not the far reaches of Mars nor the gaseous expanses of the outer planets that have brought to humanity the most miraculous discoveries in the field of space explorations. The most fascinating and ground-breaking moments, one that could hardly have been imagined by the science fiction authors of the 20th century, happened in the Earth's own back yard – the Moon”....

Emotion and behavior

The group researching the emotional-behavioral aspect had two students from Croatia and one from Israel. The leaders of the group were Karen Goffman-Stukalsky, counselor at the Hofim center and Ksenija Benaković the director and psychologist of the “Wind at your back” center. The aim of the group was to research whether people think that the moon influences people’s bodies and behavior.

In the first stage they read about the moon. After reading research on it they decided to focus on the influence of the moon on people’s sleep. The purpose of this research was to explore how people sleep when there is a full moon. The children created a questionnaire that was sent via Google sheets to 40 participants, 40.5% male 59.5% female.

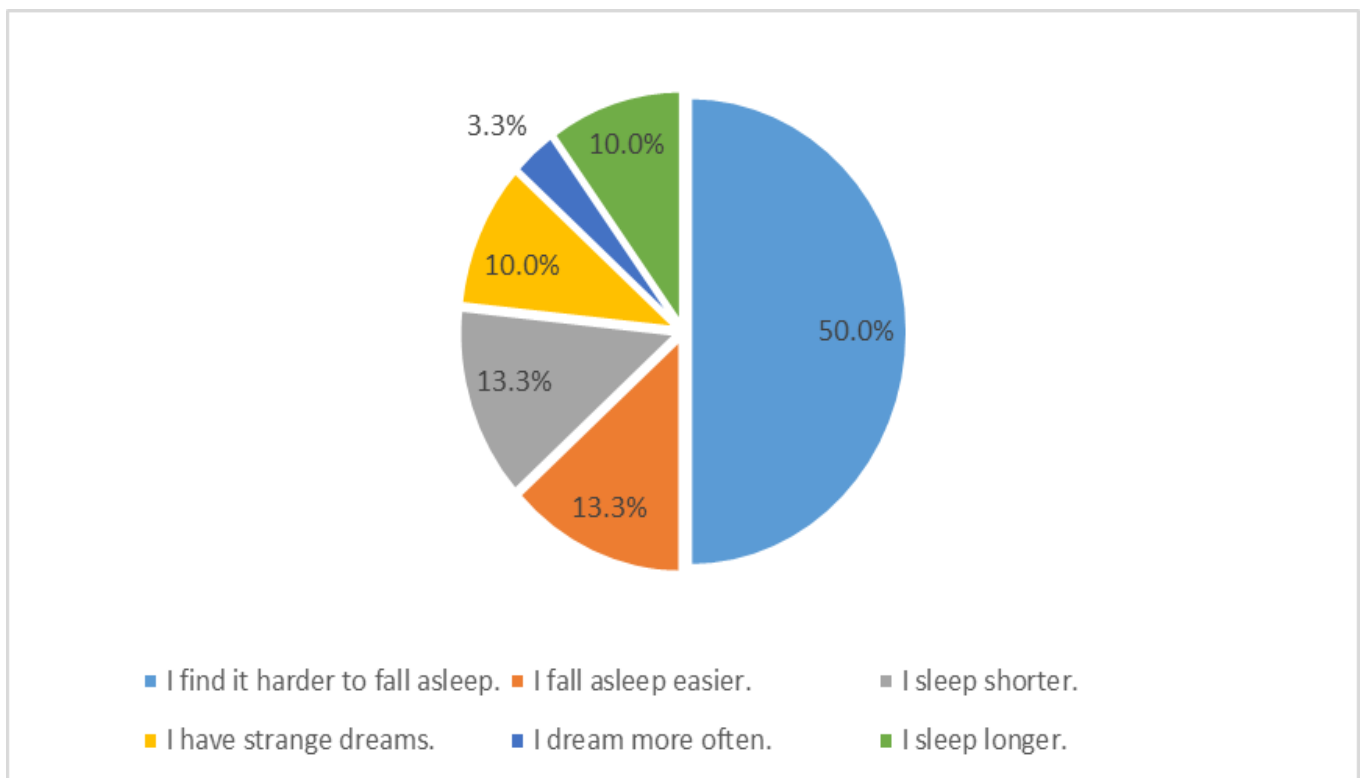


Figure 7: Expressions of the change in feelings during a full moon.

The results indicate the effect on sleeping, for example 50% of the participants find it harder to fall asleep and 13.3% sleep shorter and 10% have stronge dreams when there is a full moon.

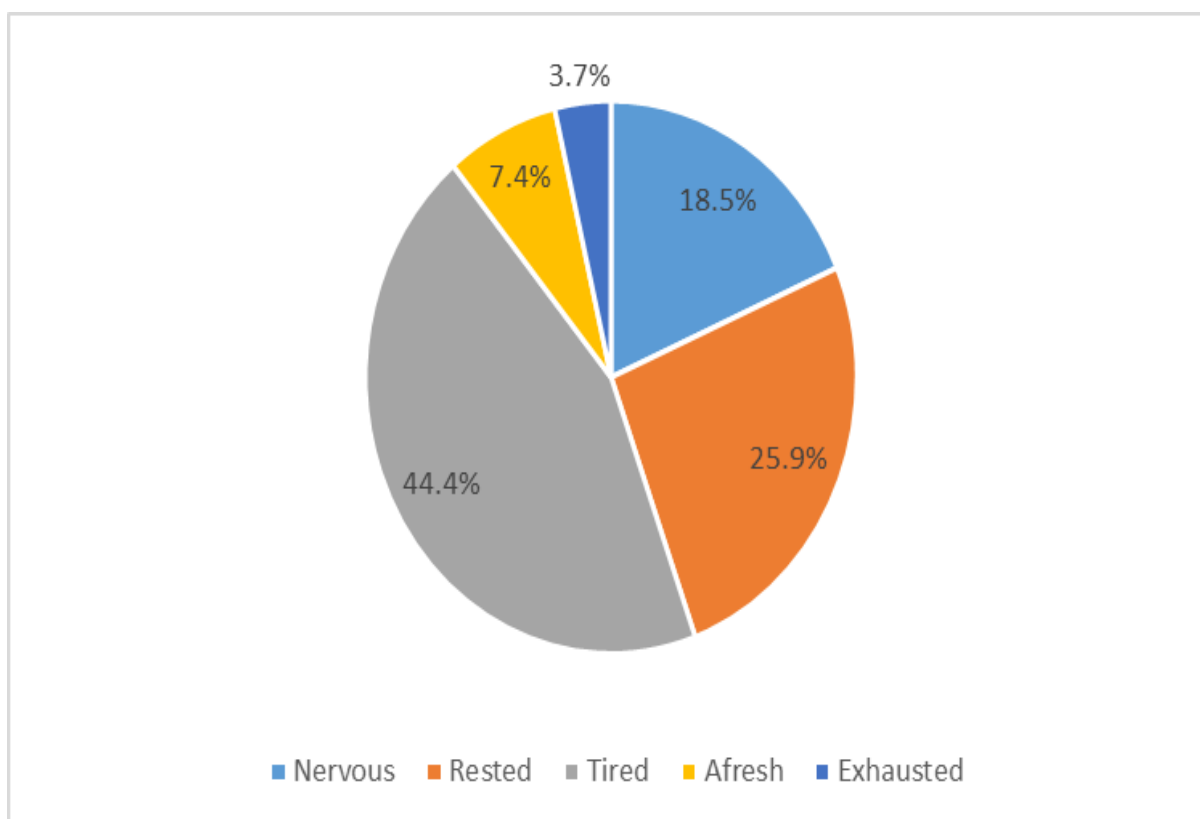


Figure 8: After a full moon night.

The children asked the participants why they think a full moon affects their behavior. 44.4% were tired, 25.9% Rested and 18.5 % were nerves. The answers indicate that people have a range of explanations, most of which are scientific and some are behavioral. For example, a scientific explanation: “because of the effect of the sea”; “because of the effects of the moon on Earth”; “because of special formation between earth, moon and the sun that creates special energy”. Examples of a behavioral explanation: “I feel moor [more] energized and stay awake later than usual and I wake up tired”; “when there is less light I can sleep better, I don’t really like darkness”. The conclusion is that a full moon affects different people differently. Some feel tired and must rest and a minority are excited or awake.

The students were asked to continue the story from this point along the project.

Discussion

Studies show that learning in a multicultural environment helps develop fertile thinking, flexibility and creativity; exposes participants to different perceptions and ideas; and influences their ability to use ideas from different cultures and to retrieve unusual information and raise far-flung associations in order to come up with fruitful ideas (Chang et al., 2014; Dziedziewicz, Gadja, & Karwowski, 2014; Leung, Maddux, Galinsky, & Chiu, 2008).

The decision to undertake shared learning derived from the desire of the two staff teams at the centers in Israel and Croatia to enable students to bypass the boundaries of place and time for the learning done at the Centers themselves. The aim was to take advantage of these students’ high level of abilities for authentic learning that would enable them to express their cognitive skills and satisfy their curiosity about getting to know students from a different culture and reality. Needless to say, everyone involved wanted this collaboration, but in the period before the outbreak of the COVID-19 virus, the objective difficulties such as coordinating joint online sessions for teachers and students and finding the right platform outweighed the motivation and thus the actual collaboration was limited in scope. It was, in fact, the lockdown imposed on everyone at the same time and the same unknown fate

that created the opportunity for collaboration. There was a desire to go beyond the physical boundaries, even if only virtually, taking advantage of the emotional and technological availability that enabled this.

During the year we met for seven Zoom sessions. The purpose of the sessions was to meet children in another country with common interests and to research the moon together from a number of perspectives. The final summative session, to which the parents were also invited, consisted of the presentation of the research products in the different areas. Between sessions, the teaching staff from both Centers held preparatory sessions in which they coordinated the contents and carefully planned the transitions and how each session would be conducted. The learning in conditions of uncertainty was part of the experience of daily life during the pandemic, in addition to being a teaching and learning strategy used in the program.

The challenges the staff leading the program had to cope with were: finding a topic of study that was broad and relevant enough, objective difficulties with language, culture and creating a sense of belonging and acquaintance in a virtual environment among the learners, the ability to lead and manage the learning so that all members would feel their work was meaningful and their contribution evident. Another challenge was to create a social and academic continuum between the sessions, since, due to personal constraints, not all the students were able to attend all the sessions. Nevertheless, it is important to mention that some friendships that were formed continued even after the sessions ended. One of the key challenges was giving the children a sense that the virtual space, the Zoom rooms in which they met, was theirs and that the time spent on learning was for them. The way to create a sense of belonging and even cultivate student friendships was through activities prepared by Ksenija, a psychologist and director of the program in Croatia, and Karen, the program counselor at the Hofim Center in Israel. They are both very well-versed in the students' psychological characteristics. They launched the initial part of each session sensitively and pleasantly, creating a safe and comfortable space for attention and discussion. In addition to the familiarity gained in the sessions, the students created a Padlet wall on which they introduced themselves to their new friends. This space enabled the first acquaintanceship and even allowed independent friendships to develop between students from both countries outside the group sessions on Zoom.

The choice of the moon as a topic of study and a place of refuge for the human race in a period of lockdown seemed like a safe alternative for people and turned out to be very suitable. Dr. Melamed-Katz presented experiments that enabled the students to get to know the moon as a physical environment with its own particular features. Oded provided the possibility of acting and having a shadow theater; the creative writing of a shared story led by Bojan connected the students and enabled them to enrich the descriptions of their peers. The choice of myths gave the students an opportunity to get to know different cultures and their attitudes toward the moon. The observation of emotions and behaviors led by Ksenija and Karen contributed to the understanding of the importance of the emotional aspect and an academic, emotional, social and cultural holistic view of phenomena in the world. Under the guidance of the counselor, at the beginning of each session the children participated in various games that allowed them to share emotions. In addition, various social games related to hobbies were played and each child introduced himself on a collaborative paddle board, which led to a deeper acquaintance and a sense of belonging.

The encounters with another culture and the curiosity as to 'what it's like on the other side' created a space for learning about the moon that was a connecting and sharing place. The understanding that we all share a common fate – not just because of the COVID-19 virus, but also because we are all subject to limitations of movement and freedom created learning options that illustrated the freedom of thought and the possibilities that connections between students from different countries can create. The humor that is typical of gifted children was found to cross borders and enhanced the sense of belonging.

Throughout the sessions the sense was of learning at a changing pace and in the spirit of the times. For the most part, curiosity and motivation were high. With the end of the lockdown and the

return to routine, the school year was coming to a close. At this stage the students chose in which group they wanted to do their research. With the help of the mentors, there was learning that integrated the various models of teaching the gifted. Renzulli's (1978) Enrichment Triad Model enabled to introduce in-depth study of the topic leading to the products of the study of the moon. Exploring the moon was in-depth and holistic and required both creative and divergent thinking, which were expressed in the different perspectives of science, art and emotional behavior. These components are part of the pedagogical approaches both in Israel and in Croatia. These complementary components are part of our daily lives. Including principles of mediating for meaning and transcendence led to meaningful learning involving the ability to use strategies for teaching gifted students and maintain their motivation, attention and impulse regulation (Tzuriel, Bengio & Kashy-Rosenbaum, 2011) It should be said that even in Zoom meetings that required patience, attentiveness, waiting for one's turn to speak student, this was evident.

Creative thinking was part of both the teaching-learning strategies and the learning outcomes. In science, it was solving problems related to reaching the moon and living there. In art, it was the creation of a shadow theater and a play, and in writing it was a story and there was also the planning of a study on the emotional-behavioral aspect.

Other challenges were linked to language and culture, starting with accepted forms of communication in each country, WhatsApp and emails, and studying in a language that is not the students' first language, as well as bridging the difference in time zones. All the sessions were all conducted in English. For most of the students this is a second language. It may be that this fact also brought the students together. It is interesting to note that there was hardly any language barrier. Many students were active in the sessions, they expressed themselves, contributing and creating. and they even continued their contacts with no mediation. A few students were afraid to speak, however, with the mediation and encouragement of the staff they were able to contribute. The work in small groups and the use of additional forms of expression such as drawings, video clips and music also made the students more confident about expressing themselves. In the final session the students presented their products. It seems that despite the challenges of language, time and motivation, meaningful learning did take place both for students and teachers alike.

In summation, this was a unique international program; a 'first' for all the staff and students and meaningful for everyone involved. Despite having to cope with challenges, what took place constitutes culturally, socially and academically meaningful learning. Looking forward to the future, we intend to expand the program, as it is suitable 21st-century learning that enables students to already experience learning as it takes place in the world of work that they will be joining in the future.

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