

Ancient Egypt: Gifted People Learn by Playing with Home Enrichment during Pandemic

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Abstract

With the social distancing imposed by the pandemic caused by SARS COV-2, many students around the world found themselves estranged from their schools and friends, with limited access, in many cases, to an educational environment. The literature points out the importance of such an enriched environment, especially for students with High Abilities or Giftedness with regard to the development of their potential, talents and self-concept, in the motivation to promote learning and for emotional balance. Concerned with this issue, researchers experimentally promote a playful home enrichment model with four gifted children in the ancient Egypt theme. The results were promising, taking into account the feedback from the participants, learning aspects and the evaluations carried out throughout the process. This fact has motivated the desire to expand the proposal as a means of educational supplementation, even post-pandemic, seeking more quality in teaching and greater motivation on the part of students.

Keywords

Home Enrichment, High Abilities or Giftedness, Covid-19, Social Isolation and Education

1. Introduction

The world has faced and still faces a serious health crisis caused by the widespread contagion of the SARS COV-2 coronavirus, popularly known as COVID-19 (Tian et al., 2020), which forced the World Health Organization to declare, on March 11, 2020, pandemic status (UNA-SUS, 2020).

While experts searched for solutions, a series of interventions to reduce the transmission of the virus and stop the rapid evolution of the pandemic were implemented by most countries, among which the progressive measures of social distancing stand out (Aquino et al., 2020; Oraby et al., 2021).

The objective of social distancing was to promote distance between people and consequently the reduction of transmission of a given disease, avoiding an uncontrolled increase in the number of cases so as not to collapse health systems (Sanar Medicina, 2020; Aquino et al., 2020).

Social distancing is considered extended when it is applied to everyone, working from home is encouraged, educational institutions are closed and only essential services are maintained. Distance is said to be selective when only the risk group must remain at home, a fact that can increase the contagion rate and probabilistically make it difficult to contain the epidemic (Sanar Medicina, 2020; Aquino et al., 2020).

In many countries, expanded social distancing was adopted at first, where only essential services were maintained, encouraging remote work and paralyzing universities, schools, shops and services. Gradually, social distancing has been relaxed over the last two years, however, in many territories it is still being practiced, as a strongly indicated measure (Aquino et al., 2020; Oraby et al., 2021).

Regarding the educational field, many students in several countries around the world have experienced remote (Garcia et al., 2020; Moreira, Henriques, & Barros, 2020; Arruda, 2020) and/or hybrid classes (Leandro & Corrêa, 2018; da Silva Neta & Capuchinho, 2017) during the most critical phases of the pandemic.

Despite the efforts, weaknesses in the online teaching offered by many schools became the subject of discussion and many parents observed a lack of interest on the part of students in school tasks and a commitment to the quality of education offered (Moran, 2020; Petrie, 2020).

The global health crisis has highlighted the importance of seeking strategies to supplement the teaching offered, in order to increase quality and promote greater motivation for teachers. In this scenario, the question is: what to do with students who have experienced school years with education in remote and/or hybrid modalities, in social distancing and in many cases dissatisfied with the educational aspects offered?

When thinking about High Ability or Gifted students—HA/G (Renzulli, 1986, 2014a, 2014b; Renzulli & Reis, 1997) who naturally have their own educational needs, the difficulties experienced seem to gain more evidence.

In Brazil, the National Policy on Special Education defines students with HA/G as those who show remarkable performance and/or high potential in the following aspects: general intellectual capacity; specific academic aptitude; creative or productive thinking; leadership ability; special talent for the arts; and psychomotor capacity, whether isolated or combined (Ministério da Educação, Brasil, 2001).

HA/G students are individuals who need school enrichment (Renzulli & Reis,

1997; Renzulli, 2014a, 2014b), in order to meet their varied interests, talents and motivational levels, promoting the development of their potential and their creative production (Sabatella & Cupertino, 2007).

However, school enrichment in times of a pandemic seems to have remained in the background, since the emergency scenario forced teachers and students to migrate the face-to-face educational process to digital platforms, in many cases almost without planning and training, experiencing great challenges (Rondini, Pedro, & Duarte, 2020).

In this context, the present work reports a model of home enrichment (Souto & Delou, 2021; Souto et al., 2022), created by researchers and applied in partnership with families, to four Brazilian children HA/G, aged 6 to 8 years old, with ancient Egypt theme and in remote mode.

The objective is to report a successful practice of the home enrichment model (Souto & Delou, 2021; Souto et al., 2022), which took place through the application of a set of playful and pedagogical activities, generated from a main theme, with HA/G children, during the pandemic phase, as an experimental strategy of learning through play.

The intention was not to replace the school and its enrichment process (Renzulli, 2014b) but to offer, during the health crisis that brought profound changes to the educational system in Brazil and the world (Musaddiq et al., 2021), a model enriched environment for students with HA/G (Souto & Delou, 2021; Souto et al., 2022).

Using an experimental strategy, the model promotes a supplementation process, through an investigative methodology (Mourão & Sales, 2018; Baldaquim et al., 2018; Medeiros & Goi, 2020) that allows the development of practical activities, concerned with the aspect student's cognitive

The positive results, taking into account the feedback from the participants, learning aspects and the evaluations carried out throughout the process, demonstrated the feasibility of implementing a supplementation strategy concerned with increasing the quality of teaching and promoting motivation for students with HA/G.

Next, the article presents its theoretical foundation, conceptualizing aspects that involve HA/G and highlighting the importance of Joseph Renzulli's triadic model of enrichment for this audience. In the sequence, it presents the development and results of the work, followed by its conclusion.

2. High Abilities or Giftedness and the Triadic Model of Enrichment

In the view of common sense when talking about Skilled or Gifted, it is natural for people to refer their thoughts to great geniuses of humanity for their important contributions left to society. Virgolim (2007) says that this is a limited view that occurs due to society's lack of knowledge regarding the theme and that possibly occurs because the word refers to superheroes.

The identification of people with High Abilities or Giftedness has been the focus of many researches and discussions in the world, a fact that has forced the emergence of several instruments and protocols for these assessments, as well as studies to prove their effectiveness (Worrell et al., 2019; Pérez & Freitas, 2016).

Among the numerous theories that involve the characterization and identification of people with HA/G, the three rings theory (Renzulli, 1986, 2014a) by Joseph Renzulli (renowned researcher at the National Research Center on Gifted and Talented at the University of Connecticut, in United States) is the most accepted in the field, for its unique contributions and for many years it has been the most used in the United States (Worrell et al., 2019).

According to the three-ring theory, giftedness requires an interaction between superior skills, creativity, and task involvement (Renzulli, 1986, 2014a).

Renzulli establishes two types of gifted: academic and creative-productive (Worrell et al., 2019; Renzulli, 2014a). Getting good grades in school, learning easily, enjoying the school environment, having excellent verbal and/or numerical reasoning, having a good memory, having intense perfectionism, needing mental stimulation, being a perfectionist are some of the characteristics normally present in people who are gifted academic. On the other hand, thinking by analogies, using humor, being creative and original, not caring about conventions, not liking routine, finding order in chaos, demonstrating diversity of interests, sensitivity, self-awareness, questioning rules, are some characteristics of the creative-productive gifted (Virgolim, 2007).

By mapping cognitive and affective characteristics of the gifted, Renzulli demonstrates the existence of strengths and also socio-emotional weaknesses of these students. This fact makes clear the need to monitor them for the development of their potential and for the formation of an emotionally healthy individual on the part of the family, the school and society itself (Virgolim, 2007).

Concerned with the school care of students with HA/G in such diverse educational environments, Renzulli publishes, together with the three-ring theory, the Triadic Model of Enrichment (Renzulli & Reis, 1997; Renzulli, 2014b; Worrell et al., 2019). It is a learning theory that seeks to stimulate creative, intellectual talent and gifted behavior in all students with potential (Burns, 2014). The Triadic Model consists of three types of school enrichment I, II and III (Renzulli, 2014b; Burns, 2014; Virgolim, 2014).

Type I enrichment focuses on general exploratory activities, with broad access to information (Worrell et al., 2019), aimed at all students without distinction. At this stage, students undergo experiences in the most diverse areas of knowledge, in the form of lectures, fairs, videos, games, classes, technical visits, etc. The intention is to put them in touch with information and various questions so that they can arouse genuine interests and later deepen their studies (Renzulli, 2014b; Burns, 2014; Virgolim, 2014).

Type II enrichment promotes training in task execution, seeking to develop in the student skills and competences for investigative research, decision making,

problem solving and critical-creative thinking. Activities at this stage focus on domains, skills and content knowledge and seek to provide students with subsidies to continue with more advanced studies (Worrell et al., 2019; Renzulli, 2014b; Burns, 2014; Virgolim, 2014).

Type III enrichment promotes more complex activities, involving support oriented towards the development of creative projects and is aimed at students who show great interest in studying a specific area of knowledge in depth, investigating, researching and solving real problems (Worrell et al., 2019; Renzulli, 2014b; Burns, 2014; Virgolim, 2014).

It is important to note that Renzulli's school enrichment model (Renzulli, 2014b; Burns, 2014; Virgolim, 2014) allows flexibility in terms of its stages according to the student's interest and maturity, that is, it is possible to start with type III, then return to II, for example.

Access to an enriched environment, suited to the educational and personal needs of the student with HA/G, implies offering a spectrum of possibilities in the most diverse areas of human knowledge so that each one can fully develop their creative potential, autonomy and abilities. The opposite of this is problematic for the HA/G student, who can become disinterested and lose motivation for studies (Hamza, Abo Mohamed, & Elsantil, 2020). Concerned with this issue, the authors promote, during a pandemic, a model of home enrichment with the theme of ancient Egypt described below.

3. Ancient Egypt Themed Home Enrichment

Due to the social distancing measures caused by COVID-19, children, especially those with HA/G, were severely affected, as they found themselves removed from their schools, with restrictions on experiencing enriched environments and limited to socializing with friends. Researchers thought of a home enrichment process (Souto & Delou, 2021; Souto et al., 2022) as a way to provide an enriched environment at home, making it possible to learn and play with topics of interest.

Understand by home enrichment the promotion of an enriched environment, at home, through a set of playful and pedagogical activities, based on a main theme, working skills and competences in the various areas of human knowledge (Souto & Delou, 2021; Souto et al., 2022).

In this context, a sequence of didactic activities, about ancient Egypt, were defined and applied to four Brazilian children with HA/G who were deeply dissatisfied with the remote teaching offered by their respective schools. These are two couples of siblings identified with HA/G, three of the children aged 8 years and only one aged 6 years.

The theme about ancient Egypt was the background for creating the sequence of didactic activities. The definition of this subject came from the interest of one of the children in the group who spontaneously saw videos on the internet on the subject, increasing her enthusiasm.

The activities were applied by the researchers with each couple in the face-to-face modality and with the quartet in the remote modality, always with the

mothers. The remote stages had the objective of integrating children, learning and evaluating the contents worked.

As for Egypt, it was possible to work a little on the main topics that involve this ancient civilization, from writing through hieroglyphics on papyrus and/or stone walls, the pyramids in their purposes and construction challenges, the polytheistic religion with the main gods and the mummification process (Teodoro, 2020), the importance of the Nile River for agriculture as the main economic activity, art, the hierarchical structure (Escola Kids, 2022), the importance of women in Egyptian society, recent discoveries, among others topics (Antigo Egito.org, 2020).

Nine activities were established involving some areas of human knowledge, seeking to develop skills and competences in a playful way and seeking to provide an enriched environment, according to the children's interests. The activities and application process will be presented below:

Activity 1—Egyptian writing. At this stage, the children had access to the Egyptian alphabet and were able to write freely using hieroglyphic clippings obtained from the internet (Figure 1). In this task, the areas of history, Portuguese language and arts were worked.

It is worth noting that everyone liked the proposed activity, but one of the boys had difficulties getting his hands dirty with glue due to sensory overexcitability (Dabrowski, 1964, 1967; de Oliveira, Barbosa, & de Alencar, 2017), which was minimized with the use of brush to avoid contact. While one of the girls, in the second couple, liked the differentiated writing so much that she started to write in her diaries and diaries using hieroglyphics so that people would not have easy access to her secrets.

Activity 2—Construction of Egyptian pyramids. In this task, the children needed to measure, cut, assemble and glue three pyramids of different sizes, simulating the three most famous pyramids in Egypt—Keopes, Kephrem and Menkaure (Antigo Egito.org, 2020). Basically, three areas of knowledge were explored: history, arts and mathematics. In mathematics, in addition to the task of measuring the faces of the pyramid, knowledge was extrapolated to geometry, through the exploration of pyramids with square, triangular, pentagonal and hexagonal bases, as well as the planning of the pyramids in the different bases. Figure 2 shows a couple of children making their pyramids.



Figure 1. Application of activity 1—Egyptian writing.



Figure 2. Application of activity 2—Construction of Egyptian pyramids.

It is important to note that in one of the pairs, when requesting the flat design of the pyramids on the different bases, they were drawn without hesitation. With the other pair, the mother commented that initially she did not have time to follow the execution of the pyramids. However, the children’s motivation for the activity was such that they tried to do it alone and the result of such an attempt clearly demonstrates a rich geometric perception on the part of the children.

Activity 3—Mockup of Egypt. At this stage, the children assembled a representative model of Egypt with the three most famous pyramids, sphinx, gods, Nile River, pharaoh, mummies, treasures, artifacts, among other elements. In this activity, the historical part was once again explored, talking about the polytheistic religion with several gods, the mummification process, the importance of the Nile River, economic activities and the hierarchical structure of Egyptian society, among other topics (Teodoro, 2020; Antigo Egito.org, 2020; Escola Kids, 2022). Artistic skills were also extensively explored, as well as creativity in the process of building the model. With the model ready, they recorded videos presenting the work and the history involved in that scenario. The video recording functioned as an evaluation mechanism. Figure 3 shows the models made by the two pairs.

It was an activity that took a lot of time, but left the children motivated until the end. It is worth mentioning that the child who inspired the Egypt theme wanted to win a toy, which simulates an Egyptian pyramid, available on the market for around \$2.800.00. The mother talked about how she couldn’t buy the toy. When carrying out the activity, this child argues: “Mom, it is much better to build our pyramid than to buy it, much more fun”.

Activity 4—Papyrus. In this activity the children were invited to make and illustrate their own papyrus. It is an illustrative papyrus (Figure 4), made with coffee grounds and burned at the ends to represent the marks of time. Then they drew and painted Egyptian images with ink. The writing and art of the Egyptians (Antigo Egito.org, 2020) were explored in this task. Extrapolating, chemistry was mentioned with the issue of paper combustion.



Figure 3. Application of activity 3—Model of Egypt.



Figure 4. Application of activity 4—Papyrus.

This activity was a great game, where children under the supervision of their mothers burned the ends of the supposed papyrus.

Activity 5—Videos and discussions about Egypt. The activity took place remotely with the four children, simultaneously. He represented the first contact of the group who watched videos about Egypt, exchanged information and answered several questions on the subject. The area of history was widely explored through the use of technology.

The children's interaction was excellent, they were motivated and with homogeneous knowledge about the subject. This activity represented an evaluative moment with the whole group.

Activity 6—Online games about Egypt. Remote stage took place with the quartet as a learning and evaluation activity. The children were invited to answer a quiz, with 15 objective questions, produced by the researchers using the Kahoot software. The questions were prepared with time for answers and applied alternately between pairs of boys and girls, purposefully separating the brothers to verify the rapport, the diversity in the answers, as well as to create a moderate competition. The pairs correctly answered the questions and complained about the time stipulated for the answers, considered high. However, the time, which averaged around 45 seconds, was defined so that it was possible to explore the contents of each question. On another occasion, it is necessary to change the strategy, reducing the time of each response and carrying

out the exploration of the contents after the correct result presented by the system.

A memory game about Egypt (Escola Game, 2022) was also applied at this stage, where they answered pairs and pairs together. With each hit, the game brought a short text about Egypt read by them voluntarily.

In this activity, memorization, reading, technology, teamwork skills, among other aspects, were explored. **Figure 5** shows an illustration of the quiz and the online memory game.

Activity 7—Memory game. The fact that the online memory game was widely accepted stimulated the application of an activity that created a physical memory game, with Egyptian images. **Figure 6** illustrates the games made.

Activity 8—Mummy. This activity deepens concepts of Egyptian religion, seeking to reproduce the mummification ritual (Teodoro, 2020). One of the children in each pair was symbolically mummified. **Figure 7** presents photos.

Activity 9—New discoveries in Egypt. This activity carries out article reading and exhibition of documentaries dealing with recent discoveries in paleontology in Egypt. The articles “Mummies that emerged in the desert were from temple priests” published in the Exame magazine

(<https://exame.com/mundo/mumias-que-surgiram-no-deserto-eram-de-sacerdotes-do-templo-veja-video/>) and the documentary “Discovering Egypt: the past meets the future”, shown on January 9, 2021 on Nat GeoTravel and “13 Mysterious Mummies Discovered in a Well in Egypt”, shown on CNN Brasil on the day September 10, 2020.

An evaluation form was developed to verify the children’s acceptance of each activity of the Ancient Egypt project, as well as to guide future projects. The form, shown in **Figure 8**, was applied at the end of the project, individually to each participating child. He brought the description of the activities and a gradation (good, regular and bad), where the children indicated if they liked it; if you liked it more or less; or if you didn’t like the activity. At the end, it brought an observation field to justify any possible response, when necessary. **Figure 9** presents a graph with the sum of the responses obtained.





Figure 5. Application of activity 6—Online games about Egypt.



Figure 6. Application of activity 7—Memory games with images of Egypt.






Figure 7. Application of activity 8—Mummy.

Evaluation Form

Project: Ancient Egypt
Participants:
Applied in:
Mode: In-person and remote

Mark with an **X** the option corresponding to your evaluation of each activity you performed (**Good** - if you liked it; **Regular** - if you liked it more or less; and **Bad** - if you didn't like it):

	Activities	Good 	Regular 	Bad 
1	Free writing with Egyptian alphabet.			
2	Construction of the Egyptian pyramids.			
3	Mockup montage of Egypt (pyramids, gods, river Nile, etc).			
4	Confection and illustration of figurative papyrus.			
5	Videos and discussions about Egypt.*			
6	Online games about Egypt (quiz and memory game).*			
7	Making a memory game with Egyptian images.			
8	Simulation of the mummification ritual.			
9	Article discussions and documentaries about new discoveries in Egypt.			

* Remote activity.

Answered by: _____ (child's name).

Observations/Justifications: _____

Figure 8. Ancient Egypt project evaluation form.

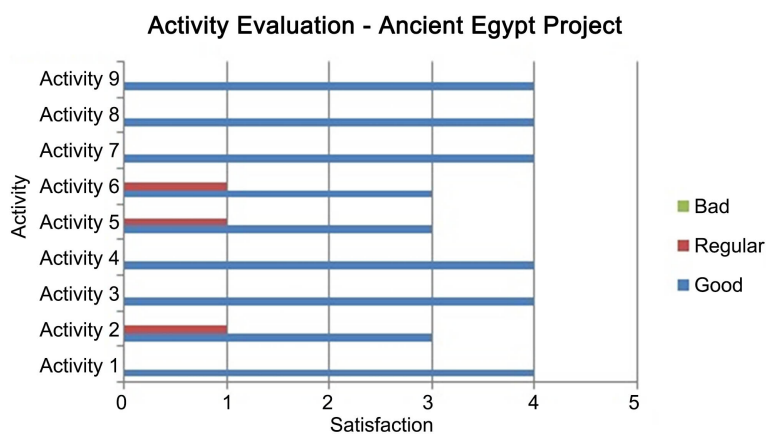


Figure 9. Responses to the ancient egypt project evaluation form.

It can be observed that two of the children presented a “good” assessment of all activities. One of the children answered “regular” to activity 5 (videos and discussions about Egypt) because they considered the information presented in the two videos to be repetitive. The fourth child answered “regular” to activity 2 (construction of Egyptian pyramids), justifying that its execution took a long time and also rated activity 6 (online games about Egypt) as “regular”, considering the time for the activities quiz answers too. No activity was considered “bad” by the participants.

4. Conclusion

Since the outbreak of COVID-19 in Brazil, most states and municipalities have chosen social isolation as the main measure to contain the contagion of the virus. This isolation was reflected in the closure of non-essential shops and services, schools, universities and the encouragement of remote work.

In the educational context, students were prevented from attending school, from participating in an enriched educational environment and from socializing in person with friends and family during almost the entire school year. When the scenario is observed in the light of HA/G, enriched teaching is even more clearly required and necessary, as described by Renzulli.

This work reports an enrichment strategy created and applied, at home, by researchers in partnership with families, to four HA/G children, aged 6 to 8 years old, with the theme of ancient Egypt, in remote and face-to-face modalities.

Throughout the process the children were motivated, collaborative, creative and investigative, making comments, making reflections, bringing ideas and suggestions, really involved in the playful learning process proposed both in face-to-face and remote activities. The results demonstrate the viability of home enrichment, proving to be promising and motivating the desire to expand the proposal.

With regard to future work, it is oriented to expand the model with a greater number of HA/G children, with more involvement of parents and with the approach of new topics of interest to the participants.

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Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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