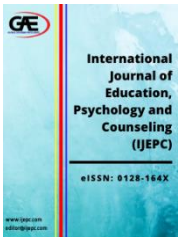
International Journal of Education, Psychology and Counseling
IJEPC
EISSN : 0128-164X
Volume 9 Issue 55 (September 2024) PP. 667-679
DOI 10.35631/IJEPC.955045



INTERNATIONAL JOURNAL OF EDUCATION, PSYCHOLOGY AND COUNSELLING (IJEPC)
www.ijepc.com

SPEECH DELAY THERAPY FOR CHILDREN: A REAL SHARED EXPERIENCE

Azlina Mat Saad[1], Fadli Fizari Abu Hassan Asari[2*], Azlina Zid[3], Salwani Affandi[4], Nor Anis Shafai[5]

[1] Independent Scholar, Perlis, Malaysia.
Email: linasaad139@yahoo.com
[2] Faculty of Business and Management, Universiti Teknologi MARA Perlis Branch, Perlis, Malaysia.
Email: fizari754@uitm.edu.my
[3] Faculty of Sports and Recreation, Universiti Teknologi MARA Selangor Branch, Selangor, Malaysia.
Email: azlinazid@uitm.edu.my
[4] Faculty of Business and Management, Universiti Teknologi MARA Terengganu Branch, Terengganu, Malaysia.
Email: salwaniaffandi@uitm.edu.my
[5] Faculty of Business and Management, Universiti Teknologi MARA Perlis Branch, Perlis, Malaysia.
Email: anis448@uitm.edu.my
[*] Corresponding Author

Article Info:

Article history:
Received date: 05.08.2024
Revised date: 25.08.2024
Accepted date: 19.09.2024
Published date: 30.09.2024

To cite this document:

Saad, A. M., Asari, F. F. A. H., Zid, A., Affandi, S., & Shafai, N. A. (2024). Speech Delay Therapy For Children: A Real Shared Experience. *International Journal of Education, Psychology and Counseling, 9* (55), 667-679.

DOI: 10.35631/IJEPC.955045.

Abstract:

Speech delay is a condition where a child's speech development is slower than it should be for their age. Statistics show that this problem plagues one in ten children. It is feared that children who face this problem will miss out on a learning process due to improper communication. On the other hand, they will also experience a lack of confidence as they are not on par with other friends. However, for every problem, there is still hope and a solution. This paper shares our experience as parents helping a child with a speech delay problem. It begins with a chronology of early detection and early intervention. Next, the idea and implementation of three types of therapy in curing the problem. Later, the success of the three therapies and the conclusion of them. It is our hope that this article can be a general guide for parents, family members, caregivers, and teachers in helping children who face the speech delay problem.

Keywords:

Speech Delay, Early Detection And Early Intervention, Therapy, Teaching Aid.

International Journal of Education, Psychology and Counseling
IJEPC
EISSN : 0128-164X
Volume 9 Issue 55 (September 2024) PP. 667-679
DOI 10.35631/IJEPC.955045

Introduction

Speech delay is a condition that develops in early childhood. It is defined as an expressive language disability or difficulties expressing oneself (Lase et al., 2024). Generally, most children pick up speech within their first few years with little effort or official instruction. Children usually require exposure to language in their surroundings to acquire the language abilities necessary for speaking and understanding others. However, for some kids, the road to understandable speech is less clear-cut. Children with delayed speech development take a longer time to master this ability (Eising et al., 2024).

In our case, when our son was four years old, he was visited by health workers from a nearby health clinic. This is part of the regular visits to monitor preschool children's development in Malaysia. In the initial examination, the health workers found that our son had a problem with delayed speech. We have been advised to get a detailed and complete examination at the health clinic. There, the medical officer on duty diagnosed our son. Next, the officer forwarded our son's case to the therapy department at the same clinic. At first, we were reluctant to attend the therapy session as we expected that this matter would be temporary and end as soon as he stepped into primary school. However, after a lengthy discussion, we believe early detection and interception are essential for any child to avoid problems later.

Later, we (the parents – refer to first author and second author) and the child were requested to attend three speech therapy appointments during the therapy session. During the session, our child was "baited" to talk. Among the methods used was through the invitation to play games provided by the therapist. Also, it was done through a casual conversation about topics children like most. There, our child's level of speaking ability was assessed. The therapist concluded that our child experienced a moderate speech delay and could be helped at an immediate rate since the detection was made at an early stage (4 years old). Among the inputs was to continuously build a more significant focus within our child through the more comprehensive involvement of all family members. The primary reason is that each child basically spends more time at home with the family than elsewhere, and the approaches that need to be taken should include verbal and non-verbal elements.

After the third therapy session ended, the world was shocked by the COVID-19 pandemic that spread rapidly in early 2020 (Lee et al., 2020). As a result, most countries, including Malaysia, have implemented a movement control order (MCO). In Malaysia, the first phase of MCO was initiated on 18th March 2021 to curb the spread of this pandemic (Tang, 2020). As a result, most Malaysians had to work from home (Hashim et al., 2020), and children, including at the school level, were requested to follow learning and teaching processes at home (Sidek et al., 2021). The same thing happened to our family. From another point of view, MCO was the best time for all family members to gather at home, and more attention could be given to this little child. Therefore, this limited opportunity must be taken to its fullest, and the approaches must be drastic and short-term to enable our child to regain his conversational and learning skills.

The main objective of this paper is to share our experience as parents in assisting our child with a speech delay problem using our original ideas as intervention strategies. The therapy approaches that were developed by us are not based on any other therapy theory. Uniquely, the development of this therapeutic approach was based on our family's condition, the child's interests, quality time with the family, guidance from the therapist, and the resources available

International Journal of Education, Psychology and Counseling
IJEPC
EISSN : 0128-164X
Volume 9 Issue 55 (September 2024) PP. 667-679
DOI 10.35631/IJEPC.955045
while adhering to the Movement Control Order (MCO) in Malaysia. As parents, we strived our best to adapt and adopt the strategies based on the circumstances listed earlier.

Methodology

At the same time, we realised that our son is a "playful" person. So, something creative, fun, practical, and involving verbal and non-verbal elements needs to be created urgently. Plus, the innovation must also be long-lasting in attracting children's interest. The primary aims were to stimulate communication and improve our child's focus. Thus, three innovations have been developed and implemented as early MCO 1.0, including **Know the Alphabet Using LEGO During MCO (*Kenal Abjad Guna LEGO Semasa PKP*), Let's Count: D.I.Y @ MCO Game (*Jom Kira: Permainan D.I.Y. @ PKP*)**, and **Let's Culture Bacteria with Me! (*Jom Kultur Bakteria Bersama Saya!*)** These three ideas and their implementations are shared in the next section (Therapy 1 - 3). The development was based on our innovation experiences, readings on official and social media, and instincts as parents. All three innovations are also modular in nature, with the first innovation being initial, the second being intermediate, and the third being advanced. Each therapy has its own specified time. The reason is that each therapy has specific levels. However, each session is scheduled for 20 minutes on average. This is to prevent the child from becoming bored and losing focus and interest in the therapy methods offered. Later, the Results and Discussion section will discuss therapies' success and related literature pieces.

Therapy 1 - Know the Alphabet Using LEGO During MCO (Kenal Abjad Guna LEGO Semasa PKP)

Five weeks were taken to complete this therapy. The duration of therapy was two sessions per day (morning and evening). We spent 20 minutes for each session. The longest time was allocated for the first therapy since the child with speech delay still struggled to speak and repeat what was taught. The main goal of this first therapy is to encourage the child to pronounce the simple alphabet. At the same time, this therapy encourages two-way communication between the child and parents. The child is instructed to repeat what he has learned. This helps the child to maintain his focus.

This therapy requires three primary materials: a marker pen, an A4-sized paper, and LEGO blocks. A variety of colours, shapes, and sizes of LEGO blocks are needed in the process. A total of five steps are proposed for this innovation:

i) Initially, parents or other family members may write the letters (small or large) that they want to teach on the A4 paper.
ii) The child is then asked to arrange the LEGO blocks on top of the writing.
iii) While placing the blocks, the child is taught about the corresponding letter and asked to repeat the pronunciation of the letter and examples that start with the letter until the arrangement is complete.
iv) Later, the child is encouraged to describe his chosen blocks' shape, size, and colour.
v) The child is also asked to count the number of blocks along the letter.

International Journal of Education, Psychology and Counseling
IJEPC
EISSN : 0128-164X
Volume 9 Issue 55 (September 2024) PP. 667-679
DOI 10.35631/IJEPC.955045

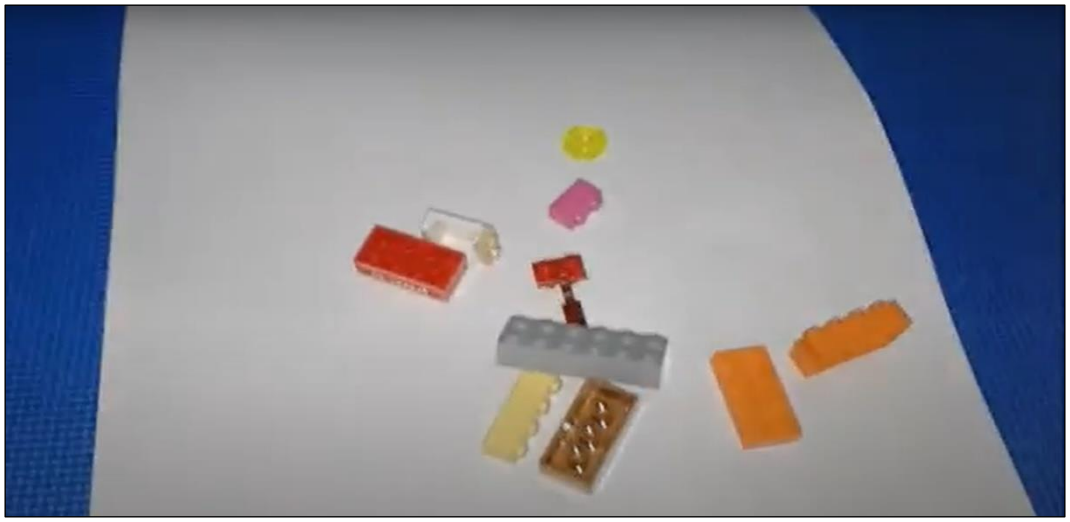


Figure 1.1: Among The Materials Required For Therapy 1.

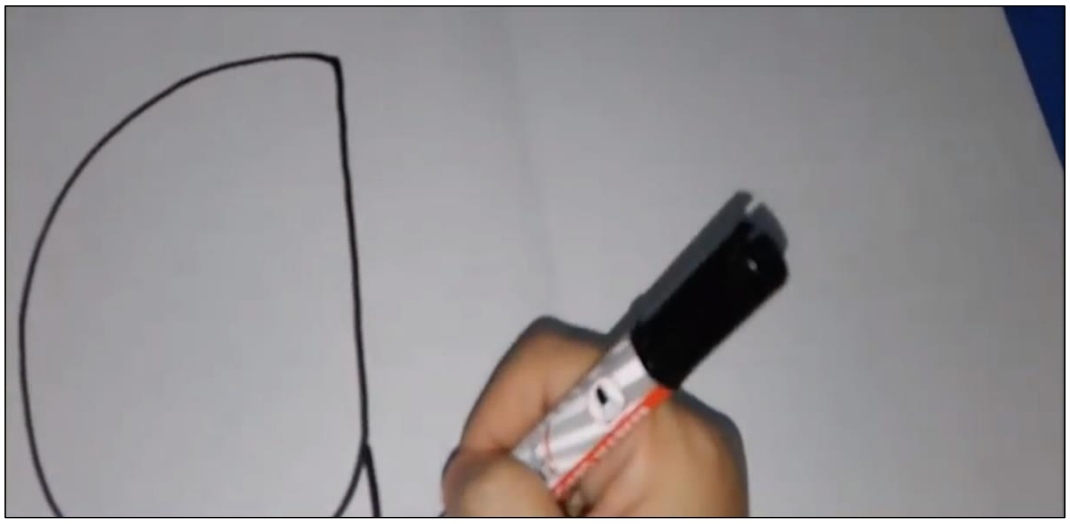


Figure 1.2: Letters (Lower Or Uppercase) Written By Parents Or Other Family Members.

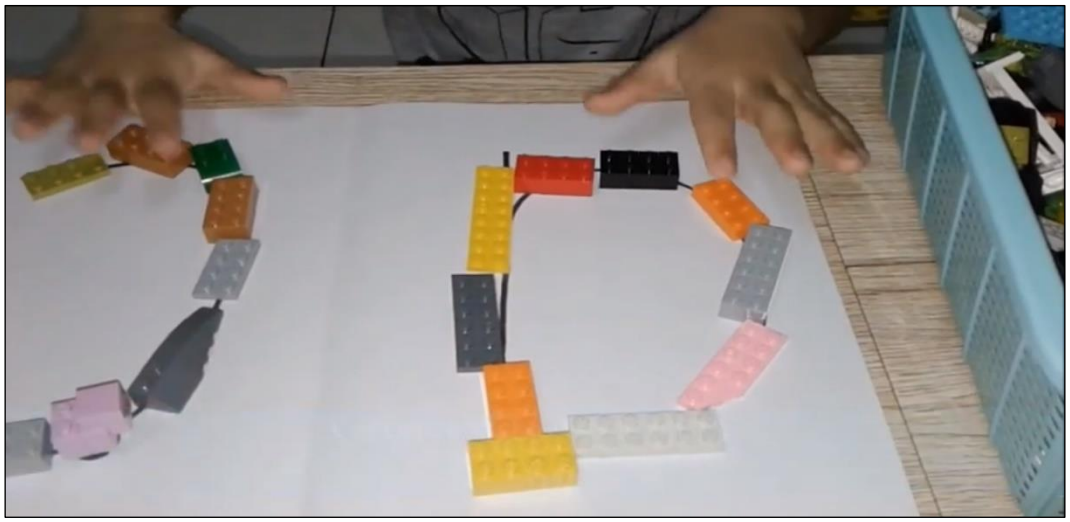


Figure 1.3: The Child Arranges Blocks While Pronouncing The Letters.

International Journal of Education, Psychology and Counseling
IJEPC
EISSN : 0128-164X
Volume 9 Issue 55 (September 2024) PP. 667-679
DOI 10.35631/IJEPC.955045

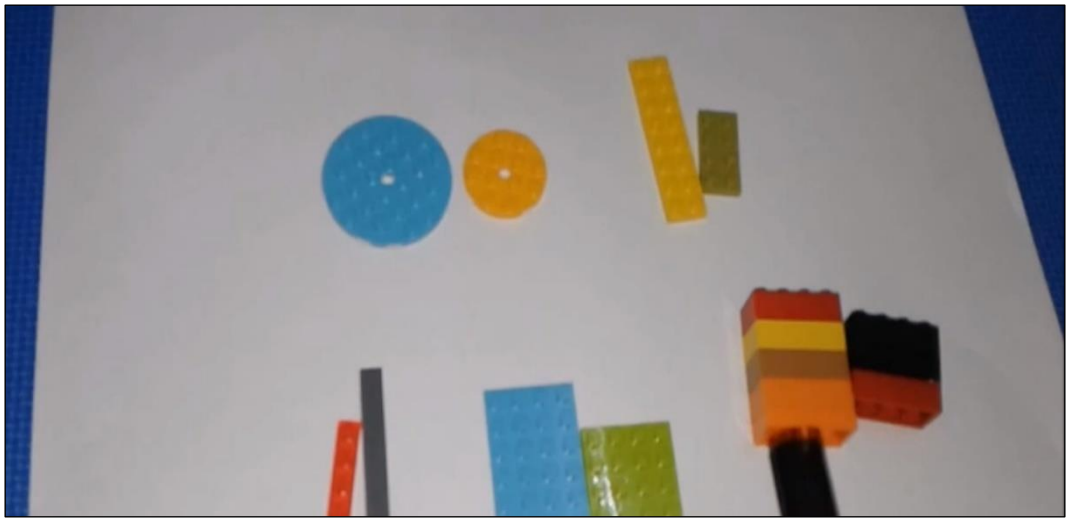


Figure 1.4: The Child Is Also Taught About The Small Blocks' Shape, Size, And Colour.

Therapy 2 - Let's Count: D.I.Y @ MCO Game (Jom Kira: Permainan D.I.Y. @ PKP)
In detail, it took four weeks to complete this second therapy. The duration of therapy was two sessions a day, in the morning and evening. For each session, 20 minutes was assigned. The main objective of this therapy is to introduce the child to numbers and encourage parent-child dialogue in both directions. The young learns to mimic what he hears, aiding the child's ability to focus, especially in the teaching and learning processes.

For this second therapy, three materials are used: a pen, a scissor, and six sheets of A4-sized paper. The seven steps are as follows:

i) Five sheets of A4-sized paper are folded into eight equal parts.
ii) Then, the papers are cut into 40 pieces of card-like paper.
iii) Next, numbers from zero to nine (0 - 9) are written randomly on the top and bottom of the playing cards.
iv) The sixth paper is then folded, cut, and written with mathematical symbols such as addition, subtraction, multiplication, division, and equal on both sides.
v) Once done, all family members are asked to choose four randomly numbered cards for each round.
vi) Family members are requested to make mathematical equations at each turn, and the used playing cards are removed from the game.
vii) The fastest in finishing the number card and saying, "I win!" counted as a champion.

International Journal of Education, Psychology and Counseling
IJEPC
EISSN : 0128-164X
Volume 9 Issue 55 (September 2024) PP. 667-679
DOI 10.35631/IJEPC.955045

Figure 2.1: The Materials For Therapy 2.

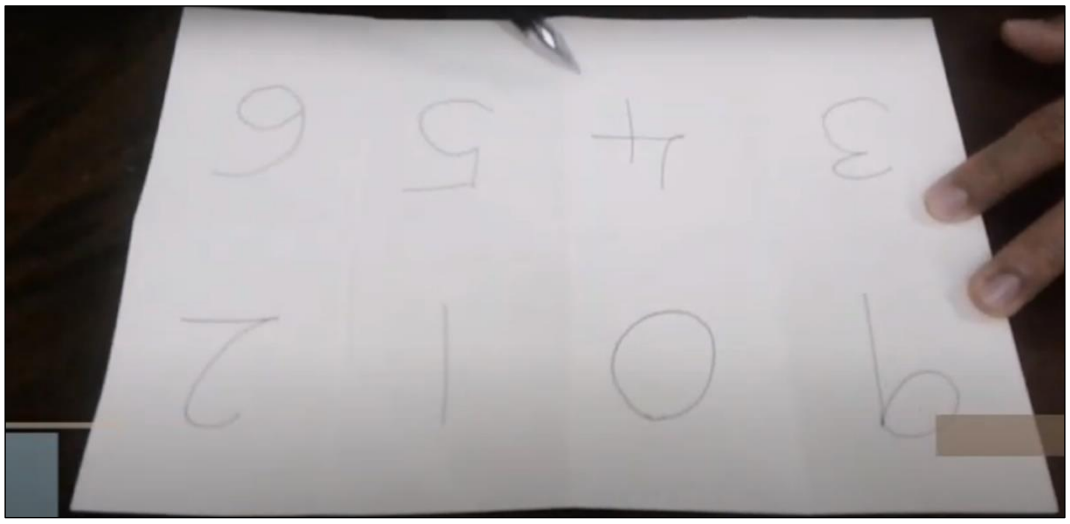


Figure 2.2: A4 Paper Folded Eight, Written With Basic Numbers (0 - 9).

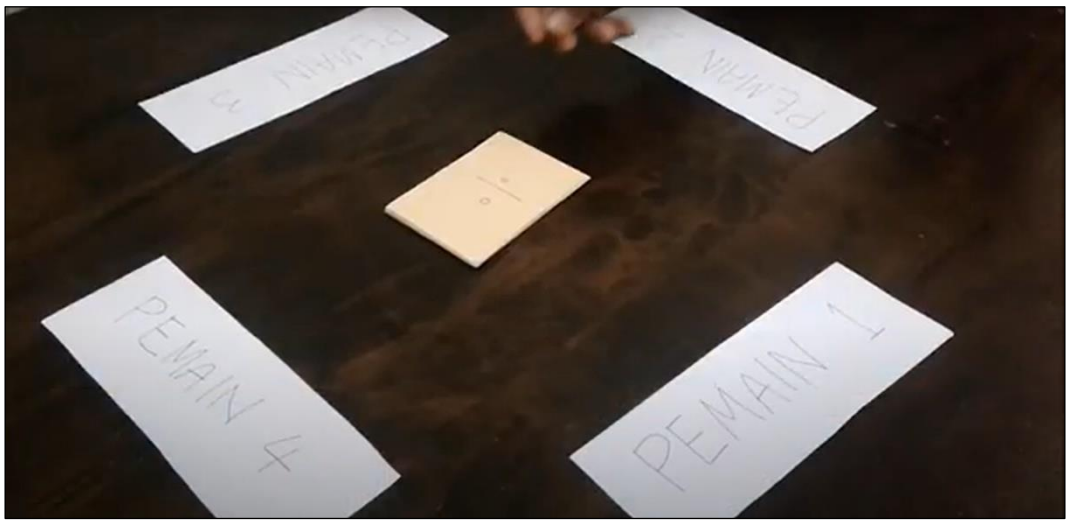


Figure 2.3: Arrangement Of Players And Cards For Therapy 2.

International Journal of Education, Psychology and Counseling
IJEPC
EISSN : 0128-164X
Volume 9 Issue 55 (September 2024) PP. 667-679
DOI 10.35631/IJEPC.955045

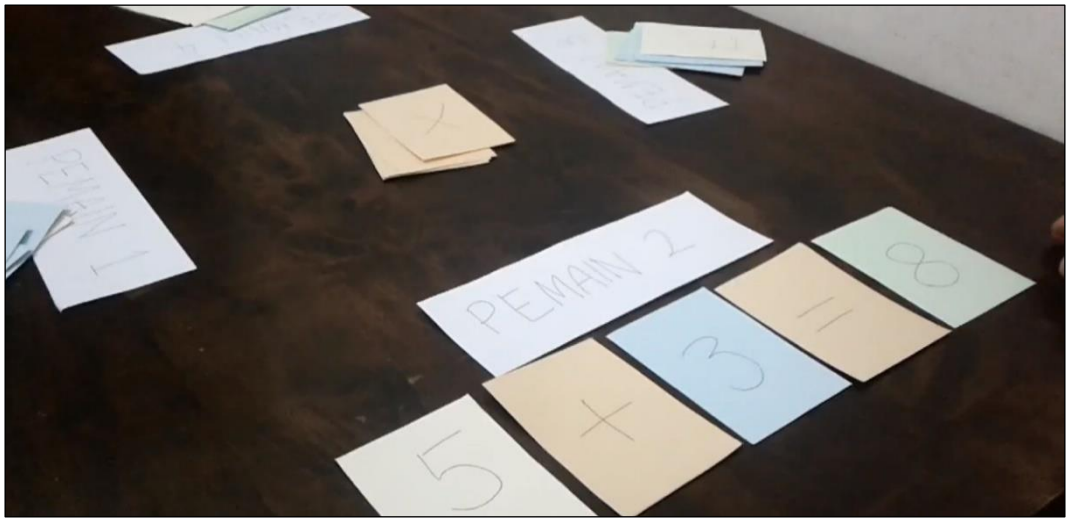


Figure 2.4: An Example Of An Equation That Can Be Done.

Therapy 3 - Let's Culture Bacteria with Me! (Jom Kultur Bakteria Bersama Saya!)
In detail, only two weeks were taken to complete this second therapy. The duration of therapy was one session a day, 20 minutes per session. Providing ongoing communication training to the kid is the primary goal of this therapy. The shortened time allocated for this third therapy since our child has shown good improvement in his speech and communication. He is good at building sentences. The use of vocabulary is also quite impressive due to the successfulness of the previous implementation of Therapy 1 and Therapy 2.

We introduced the little one to bacterial culture experiments using simple ingredients found at home, such as jelly, sugar, salt, and soap. The nine steps are as follows:

i) The child cooks jelly as a bacterial culture medium under the parents' guidance.
ii) The jelly is then poured into four plastic containers with different labels.
iii) Each container will be filled with three different ingredients: sugar, salt, and soap.
iv) Only one container is not added with other material and is a control container.
v) After the jelly cooled and hardened, the child is asked to put his hand on the four containers.
vi) Later, all containers are stored in a suitable place for several days.
vii) Children and parents will observe the growth of bacteria on each agar container using a magnifying glass.
viii) Parents will explain to children the growth of bacteria on the jelly. The child also gives his opinion and ideas while doing this experiment.

International Journal of Education, Psychology and Counseling
IJEPC
EISSN : 0128-164X
Volume 9 Issue 55 (September 2024) PP. 667-679
DOI 10.35631/IJEPC.955045

Figure 3.1: The Materials For Therapy 3.

Figure 3.2: The Jelly Is Put In The Fridge To Speed Up The Hardening Process.

Figure 3.3: Among The Observations Recorded In This Experiment.

International Journal of Education, Psychology and Counseling
IJEPC
EISSN : 0128-164X
Volume 9 Issue 55 (September 2024) PP. 667-679
DOI 10.35631/IJEPC.955045

Figure 3.4: Among The Observations Recorded In This Experiment.

Results and Discussion

The problem of speech delay was not only limited to communication disorders but also affected our children's teaching and learning processes. Our child's situation was in line with what was stated by Barry et al. (2024), Lase et al. (2024), and Feltner et al. (2023). As a result, he could not identify letters and numbers at all, even though he was four years old. This situation worried us as these two things (letters and numbers) are also the basis of life. Early warning given by health workers was a game-changer for our son's speech delay problem. The same goes for the three therapy sessions we attended, which emphasised the importance of the significant role of parents in immediately treating this problem. This initial intervention is strongly proposed by Ulfah et al. (2024), Ariffin et al. (2024), and Maltman et al. (2023). For Speights et al. (2024), early intervention is essential even though it is detected at a minimal level, and there is a lack of evidence during the diagnosis process. Therefore, we have taken various measures to help our son to overcome his speech delay. These three innovations were part of them.

For the first therapy, **Know the Alphabet Using LEGO During MCO *(Kenal Abjad Guna LEGO Semasa PKP)***, we believe a game can re-engage our child's interest and focus on teaching and learning processes. This was the first intervention step since our child still had trouble in recognising letters and numbers at the beginning of the MCO 1.0 period. This therapy was conducted consistently until he could recognise all the letters (A - Z) and the first 20 numbers (1 - 20), which later served as a basis for the following teaching and learning processes. Touching and arranging these small blocks is a non-verbal element that can activate the child's psychomotor, which consists of cognitive functions and physical movement (Ejekwu & Duruh, 2024). This kind of games initiative is still relevant until now and is also supported by recent works of literature such as Buriyeva (2024), Flaherty et al. (2024), and Saratikyan & Harutyunyan (2023). Our child successfully recognised letters, shapes, colours, and sizes from this game. In addition, we found that his vocabulary has improved. He was also more diligent in communicating and said what he wanted more often instead of showing something with his hands. More importantly, this fun learning therapy has succeeded in breaking down the barriers in our child's mind, which was previously utterly uninterested in the formal learning process.

International Journal of Education, Psychology and Counseling
IJEPC
EISSN : 0128-164X
Volume 9 Issue 55 (September 2024) PP. 667-679
DOI 10.35631/IJEPC.955045

The second therapy, **Let's Count: D.I.Y @ MCO Game *(Jom Kira: Permainan D.I.Y. @ PKP)***, is a more playful and win-win approach for all family members, especially our two children. The speech-delayed child felt more valued as all family members played with him. At the beginning of the game, he was only asked to recognise the basic numbers (0 - 9). Next, he was asked to arrange the numbers in ascending or descending order. At the same time, the eldest son, who was 12 years old, was asked to do a mathematical equation. This is necessary so that attention is not only limited to the youngest child but can also be shared with the eldest child. At the same time, the eldest child would develop feelings and responsibilities, consciously or unconsciously, when curing the youngest child's speech delay problem. The two-pronged strategy must be inclusive, so that no one feels left out during this therapy period. At the same time, a healthy and balanced brain is essential to intellectual development from an early age (Owolabi et al., 2023). The left brain is more logical, and Mathematics is more dominant there. This can complement the right brain, which focuses more on creativity (Mayfieldclinic, 2018). At the end of the MCO 2.0 phase, the youngest child could apply the basic mathematical equations (addition process).

The continuous application of these two therapies has successfully cured our son's speech delay. His pre-school teachers acknowledged his improvement. In addition, these two therapies also helped our child recognise the letters and numbers he learned. Another positive effect was a dramatic increase in focus in the classroom. He also responded more quickly to the teacher's instructions and became more disciplined. These positive effects have significantly impacted this little child, and he managed to catch up on his missed lessons. He was also recognised as being on par with his peers. This good news has given us happiness. However, we could not stop there. The second issue - lack of self-confidence, which is closely related to speech delay (Yuniari & Santosa, 2024; Faruq et al., 2022; Jullien, 2021), must be dealt with immediately. Later, the little child will become a primary school student with more subjects and syllabus and has to mix with more friends. Therefore, the third therapy related to experiment and competition participation was implemented when he was in the beginning of 1st grade.

The third therapy, **Let's Culture Bacteria with Me! *(Jom Kultur Bakteria Bersama Saya!)*,** is an advanced therapy given to the child when he can fluently speak. It aims to train him to be more focused, confident, and brave enough to speak in front of others. Thus, we introduced him to a fun learning science experiment. This experiment is more practical and cheaper because gelatine has been replaced with jelly. It also involves various types of senses, from the first step of cooking jelly to the last stage of making conclusions. In addition, this child can build a hypothesis and test it in four different situations. All the processes, products, and results were then recorded in a video format and participated in the Young Little Scientist 2.0 (LCS 2.0) competition organised by Universiti Teknologi MARA Johor Branch. This competition format was chosen as it was more relaxed and did not involve face-to-face presentation. Plus, it can avoid the feeling of nervousness, especially during a competition that is entered for the first time. The innovation competition is also a bridge between young children and Science, Technology, Engineering, and Mathematics (STEM), as highlighted in Zokowski et al. (2016).

Innovation and Publication

In solving our son's speech delay problem during the MCO period, we also worked from home. Key Performance Index (KPI), which includes innovation and publication, needs to be fulfilled. Thus, instead of doing two things (family and career) side by side, we did them simultaneously during the three MCO phases (1 - 3). The three therapies that successfully worked on our son

International Journal of Education, Psychology and Counseling
IJEPC
EISSN : 0128-164X
Volume 9 Issue 55 (September 2024) PP. 667-679
DOI 10.35631/IJEPC.955045

were shared and made visible to the public via innovation competitions and publications. In detail, **Therapy 1 - Know the Alphabet Using LEGO During MCO *(Kenal Abjad Guna LEGO Semasa PKP)*** has won two gold medals and one bronze medal, while **Therapy 2 - Let's Count: D.I.Y @ MCO Game *(Jom Kira: Permainan D.I.Y. @ PKP)*** has won two bronze medals. Both therapies were also chapters in book chapters (Fizari et al., 2020a; Fizari et al., 2020b). For **Therapy 3 - Let's Culture Bacteria with Me! (*Jom Kultur Bakteria Bersama Saya!*)** It got third place in the LCS 2.0 competition (Junior Category). These successes also prove that treating a speech delay problem does not necessarily have to be stressful and painful. On the other hand, it can be shared with various parties and provide rapid success, mainly in curing the problem. In addition, it may also lead to innovations, publications, and medals.

Conclusion

This article shares our actual experience as parents in curing speech delay, which was detected in our son as early as the age of four. Initial assistance from the Malaysian Ministry of Health through early diagnosis and therapy sessions is greatly appreciated. At the same time, there is an urgent need for parents and family members to be majorly involved in solving this problem. For that, this article shares the ideas, implementation, and success of three therapies for speech delay. We are also very grateful that all these can be done during the three phases of MCO when all family members stay at home. Perhaps there is a hidden wisdom behind all these.

Acknowledgement

We would like to express our gratitude to the staff of the Ministry of Health Malaysia (nurse, doctor, therapist) who helped us in detecting the speech delay problem in our child at an early stage. Specifically, during the regular visits to his pre-school and through the therapy sessions we have attended. Thank you for also sharing the guidance in developing an early intervention for curing this speech delay problem. Plus, sincere thanks are extended by the authors to everyone who helped make this outstanding piece a huge success, both directly and indirectly. All of which we greatly appreciate.

References

Arifin, S., Sa'idah, S., Sudi, M., Hidayati, N., & Fujiono, F. (2024). Effective strategies for providing communication stimulation for children with speech delay in preschools. *Jurnal Scientia, 13*(03), 55-60. http://seaninstitute.org/infor/index.php/pendidikan/article/view/2463

Barry, M. J., Nicholson, W. K., Silverstein, M., Chelmow, D., Coker, T. R., Davis, E. M., ... & US Preventive Services Task Force. (2024). Screening for speech and language delay and disorders in children: US Preventive Services Task Force recommendation statement. *JAMA, 331*(4), 329-334. https://jamanetwork.com/journals/jama/article-abstract/2814124

Buriyeva, N. (2024). Enhancing speech development in preschool children through motor activity. *Science and Innovation, 3*(b3), 223-226. http://scientists.uz/view.php?id=6864

Eising, E., Vino, A., Mabie, H. L., Campbell, T. F., Shriberg, L. D., & Fisher, S. E. (2024). Genome sequencing of idiopathic speech delay. *Human Mutation, 2024*(1), 9692863. https://onlinelibrary.wiley.com/doi/full/10.1155/2024/9692863

Ejekwu, P. O., & Duruh, L. C. (2024). School physical learning environment and the psychomotor development of preschoolers in early childhood education centres in Rivers East Senatorial District of Rivers State. *Zaria Journal of Educational Studies (ZAJES), 24*(1), 45-54.

International Journal of Education, Psychology and Counseling
IJEPC
EISSN : 0128-164X
Volume 9 Issue 55 (September 2024) PP. 667-679
DOI 10.35631/IJEPC.955045

https://zarjes.com/ZAJES/article/view/1359

Faruq, F., Sabani, N., Sukarno, A., & Purwandari, E. (2022). Systematic literature review: Psychological concepts of learning in handling speaking delay in early children. *Jurnal Penelitian Humaniora*, *23*(1), 46-55. https://journals.ums.ac.id/index.php/humaniora/article/view/19126

Feltner, C., Wallace, I. F., Nowell, S. W., Orr, C. J., Raffa, B., Middleton, J. C., ... & Kahwati, L. (2024). Screening for speech and language delay and disorders in children 5 years or younger: evidence report and systematic review for the US Preventive Services Task Force. *JAMA*, *331*(4), 335-351. https://jamanetwork.com/journals/jama/article-abstract/2814125

Flaherty, M. M., Price, R., Murgia, S., & Manukian, E. (2024). Can playing a game improve children's speech recognition? A preliminary study of implicit Talker Familiarity Effects. *American Journal of Audiology*, *33*(1), 183-198. https://pubs.asha.org/doi/abs/10.1044/2023_AJA-23-00156

Fizari, I. F. F., Zuki, N. M., Azmain, R., Karim, N. Z. A., Asari, F. F. A. H., & Saad, A. M. (2020a). Kenal abjad guna LEGO semasa PKP. In Abdullah, N., Rosman, M. R. M., Fadzil, F. H., Zawawi, M. Z. M., Salleh, M. I. M., Arshad, I. H., & Hamidon, H. (Eds.), In *Innovation Insider (Series 1)* (pp 147-152). UiTM Cawangan Kelantan.

Fizari, A. F. F., Norzaimi, M. I. E., Yunus, M. E., Fizari, I. F. F., Asari, F. F. A. H., & Saad, A. M. (2020b). Jom Kira: Permainan D.I.Y @ PKP. In Abdullah, N., Rosman, M. R. M., Fadzil, F. H., Zawawi, M. Z. M., Salleh, M. I. M., Arshad, I. H., & Hamidon, H. (Eds.), In *Innovation Insider (Series 1)* (pp 139-146). UiTM Cawangan Kelantan.

Hashim, R., Bakar, A., Noh, I., & Mahyudin, H. A. (2020). Employees' job satisfaction and performance through working from home during the pandemic lockdown. *Environment-Behaviour Proceedings Journal*, *5*(15), 461-467. https://ebpj.e-iph.co.uk/index.php/EBProceedings/article/view/2515

Jullien, S. (2021). Screening for language and speech delay in children under five years. *BMC Pediatrics*, *21*(Suppl 1), 362. https://link.springer.com/article/10.1186/s12887-021-02817-7

Lase, H., Barus, H., & Siregar, D. N. (2024). Mother's knowledge and attitude regarding speech delay prevention in children: A cross-sectional study in Pantai Labu Health Center of Deli Serdang Regency. *Jurnal Kegawatdaruratan Medis Indonesia*, *3*(1), 1-12. https://ebsina.or.id/journals/index.php/jkmi/article/view/234

Lee, S. Y., Lei, B., & Mallick, B. (2020). Estimation of COVID-19 spread curves integrating global data and borrowing information. *PloS one*, *15*(7), e0236860. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7390340/

Maltman, N., Lorang, E., Venker, C., & Sterling, A. (2023). Speech-language pathologists' self-reported language input and recommendations during early intervention. *Journal of Early Intervention*, *45*(1), 19-38. https://journals.sagepub.com/doi/abs/10.1177/10538151221086512

Mayfieldclinic (2018, April). *Anatomy of the Brain*. https://mayfieldclinic.com/pe-anatbrain.htm

Owolabi, M. O., Leonardi, M., Bassetti, C., Jaarsma, J., Hawrot, T., Makanjuola, A. I., ... & Servadei, F. (2023). Global synergistic actions to improve brain health for human development. *Nature Reviews Neurology*, *19*(6), 371-383. https://www.nature.com/articles/s41582-023-00808-z

Saratikyan, L., & Harutyunyan, Z. (2023). Characteristics of game activity organization and its influence on speech development of children with moderate mental retardation.

International Journal of Education, Psychology and Counseling
IJEPC
EISSN : 0128-164X
Volume 9 Issue 55 (September 2024) PP. 667-679
DOI 10.35631/IJEPC.955045

Armenian Journal of Special Education, 7(2), 33-47. https://specedjournal.aspu.am/index.php/se/article/view/7

Sidek, L. B., Taat, M. S., & Shariff, S. B. (2021). Teaching and facilitation (T&F) for Islamic education teachers in Sabah state's primary schools of Ministry of Education Malaysia during movement control order (MCO) - COVID-19. *Psychology and Education Journal, 58*(2), 8124-8132. https://eprints.ums.edu.my/id/eprint/26928/

Speights, M. L., Jones, M. K., & Roberts, M. Y. (2024). Recommendations for speech and language screenings: Lack of evidence should not endorse lack of action. *JAMA, 331*(4), 292-293. https://jamanetwork.com/journals/jama/article-abstract/2814159

Tang, K. H. D. (2020). Movement control as an effective measure against COVID-19 spread in Malaysia: An overview. *Journal of Public Health*, 1-4. https://pubmed.ncbi.nlm.nih.gov/32837842/

Ulfah, M., Dewi, M., & Qonita, J. (2024). Stimulation, detection, early intervention of growth and development: A case study of a child with speech delay. *Jurnal Ners dan Kebidanan (Journal of Ners and Midwifery), 11*(1), 119-123. http://ojs.phb.ac.id/index.php/jnk/article/view/1036

Yuniari, N. M., & Santosa, M. H. (2024). The importance of Individual Education Plan (IEP) in communicative development of children with speech delay: A systematic literature review. *Jurnal Ilmiah Pendidikan Profesi Guru, 7*(1), 14-31. https://ejournal.undiksha.ac.id/index.php/JIPPG/article/view/75397

Zokowski, P., Geramita, K., Ashdown, J., Brooks, B., & Thompkins, A. (2016, March). Connecting kids to STEM through entrepreneurship and innovation. In *2016 IEEE Integrated STEM Education Conference (ISEC)* (pp. 71-74). IEEE. https://ieeexplore.ieee.org/abstract/document/7457557/