

## Language and Communication Development of Students with Hearing Problems in Special Needs Schools

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### Abstract

This research aims to find out the hearing and speech problems of hearing-impaired students from the aspects of phonology, morphology, syntax, semantics, and pragmatics. Three theories are closely related to communication, language, and speech. First are behaviorism theory, nativism theory, and interactionism theory. This study uses a design-shape research case that uses a qualitative approach to explain and describe language and speech errors among students with more profound hearing problems. Results from the analysis of the findings acquired, that the research almost answered the questions by using three types of instruments: interview anecdotal records, and even checklists. Through all three methods, we can conclude that the student's hearing becomes increasingly bad, and it becomes more and more difficult for him to speak well. Students who have level hearing which is light and simple can speak if given intervention regularly while students with severe or relatively severe hearing need to get treatment immediately. Collaboration with parents also plays an important role in helping the student with hearing problems in dealing with disability. Continuous education at home and at school can have a positive impact on the students.

**Keywords:** language, communication, hearing, speech errors, disability

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## INTRODUCTION

Each child born by have intelligence separately which enable the child learns and adapts self with the environment. Intelligence along with perfect senses can help children explore the world around them by better (Su et al., 2020; Walker et al., 2020). For children problematic hearing, learning is important so children this can master knowledge by perfect Children problematic the hearing can learn to speak and read if they can hear sounds speech or by using hearing aids (Hanim, 2016).

Children learn to speak through daily interactions with adults. For enable children to speak well, they first need to be able to for listen Without hearing, progress speech children will stunt (Antia et al., 2020; Tomblin et al., 2020). Unclear and imprecise pronunciation of words is a

characteristic of children who experience speech delays. This condition occurs not only in children in one area, but has become a global problem (Moreno, 2015). This criterion is an early detection of children with speech delays, with prior screening for accompanying physical problems (Moore et al., 2020). Children with speech delays will have difficulty pronouncing words correctly and precisely. Articulation and lip and tongue movements appear stiff, and the sounds produced are soft (Tjandrajani et al., 2016). Children learn to speak through daily interactions with adults. For enable children to speak well, they first need to be able to for listen Without hearing, progress speech children will stunt. As with the research by Sawyer (2017) who conducted a study on children's motivation in speaking. The research fact found that children with speech delays do not have a strong motivation to speak compared to normal children, this condition occurs at the age of 2 years of life (Sawyer, 2017).

## **METHODS**

In research this, researcher using design shape research case which using qualitative approach to explain and describe language and speech errors among students with hearing problems more deeply. In context in this study, the researcher chose a case study as the research design. Case Study as a qualitative research strategy is then defined by Creswell (2014) as a qualitative strategy in which researchers examine a program, event, activity, process or one or more individuals in more depth. These cases are limited by time and activity, so researchers must collect detailed information using various data collection procedures over a period of time. This is in accordance with the research conducted, which is to gain understanding which is more extensive than the issue of language usage errors and influencing factors speech among hearing impaired students. This case study takes time for two weeks. A week used for collecting data early While a week again for collect and analyze data for get findings. Though time which used short for research qualitative, however in context research this, researcher can collect data which is required for purpose analysis.

## **FINDING AND DISCUSSIONS**

### **Finding**

#### ***Interview Instrument Analysis***

*The question 1: Do students problematic hearing experience problem language from side aspects phonology, morphology, syntax, semantics, and pragmatic?*

In an interview that was conducted together with two Bahasa Malaysia teachers Year 2 Merah also answered this case study question. Based on the findings obtained, the researcher has identified several themes to be used as a guide to a researcher in looking at students' language and speech problems. Table 2 shows the results of interview findings that have been coded according to several themes set by the researcher

This interview session is conducted at the life skills station and lasts 60 minutes. Results recording audio interviews transcribed in Transcription Interviews. The third theme answered the first research question. The teacher stated that both two students could not arrange the sentence according to the correct language rules and the sentence that used no clear the meaning. Things this prove that both students have language problems from a syntactic aspect. In addition, Malaysian language teachers too stated that these two students could not sound the words clearly and exactly This shows that both students studied have problems in terms of phonology.

Furthermore, the Sign Language and Communication teacher stated that student A facing the problem of affixes and always using letters capital and letters small based on words. A statement this proves students experience problems with aspects morphology. While student B anyway not able to understand the meaning of words. It is internal problems with semantic aspects.

*Question 2: Do hearing impaired students have speech problems based on level hearing which is different?*

This question is answered through the sixth theme which is the level of speech. Malaysian language teachers and Sign Language and Communication teachers have given the same answer. Based on this view, problem speech will differently follow level hearing. If, students have problematic hearing which has leftovers hearing can speak. Pupils with mild and moderate hearing levels can speak if given intervention regularly and periodically. Both teachers give emphasis to speech and language signals so students can communicate by good-like students.

**Table 1.** Interview Analysis Chat Together Language Teacher Malaysia

No	Question	Answer	Theme
1	Are the characteristics of angry students hearing which have problem language and speech?	...give response against teacher regularly speak by using language which understood.	Characteristics students
2	What is the factor which cause students problematic hearing experience problem language and speech?	...cause language which acquired very limited.	Factors
3	What is student A's language problem? and students B which frequent teacher face current learning and facilitation?	...Sentence which used noclear meaning.	Problem Language
4	What is the problem speech students A and student B who are often teachers face current learning and facilitation?	...Most students have problems hearing directly nocan speak.	Problem speech
5	What is the intervention which teacher do to overcome the problem language and speech in circle students problemati? hearing?	...Using code signal hand for facilitate students understand	Intervention

#### Anecdotes Record Instrument Analysis

In research case this, as much as two people students problematic hearing already selected as respondents. The data collected is based on anecdotal record instruments, forms interview and checklist. Data triangulation was considered to ensure validity and data reliability. Overall, the data will be analyzed using qualitative research design. The following table is an analysis of anecdotal record instruments through thematic analysis.

Based on analysis table 2, respondents first have problem language and speech in four aspects only, namely phonology, morphology, syntax and pragmatics. Respondent 1 have problem dominant in aspects pragmatic like always asking teacher repeating instructions, difficulty starting conversations in group activities with friends classmates, students are very active during the teaching and learning process and do not follow turn talk Problem next anyway from side phonology that is students difficult for identify letter sounds that have the same pronunciation, pronounce the initial word regularly prolonged and speech no clear current speak in sentence which long.

Based on the analysis of table 3, the second respondent has language and speech problems in all five aspects only that is phonology, morphology, syntax, semantics and pragmatic. Respondent 2 has a dominant problem in the phonological aspect. Among them problem phonology which faced is difficult for identify sound letters which have almost the same pronunciation, difficulty sounding final or prefix consonants, no fluent when speaking, speech not clear when speaking in that sentence long, stuttering, and difficult to use sign language. The next problem is in terms of

pragmatic which is always asking the teacher to repeat the instructions and the student’s passive during the process teaching and learning. However, students also show mark positive in semantic skills such as being able to interact with friends in the classroom and constantly follow turn to speak.

According to justification which stated, get it answered question research first that is which sounded " Do hearing-impaired students have language problems from in terms of phonological, morphological, syntactic, semantic and pragmatic aspects?" Clearly visible respondents 1 and 2 who have hearing problems experience language problems from side its aspects based on the data record anecdote.

**Table 2.** Anecdotal Record Analysis 1

<i>INSTRUMENTS ANECDOTAL RECORD 1</i>																	
<table border="1"> <tr> <td>NAME</td> <td>: Muhammad Fikri</td> </tr> <tr> <td>STUDENTS</td> <td>Hazmi Bin Abbas</td> </tr> <tr> <td>YEAR</td> <td>: 2 Red</td> </tr> <tr> <td>AGE</td> <td>: 9 Years</td> </tr> <tr> <td>DATE</td> <td>: 26 April 2024</td> </tr> <tr> <td>TIME</td> <td>: 7.40 morning until 8.40 in the morning</td> </tr> <tr> <td>NAME TEACHERS</td> <td>: Jevitha A/P Balakrishna</td> </tr> <tr> <td>PLACE</td> <td>: SK Tanjung Malim, Perak, Malaysia.</td> </tr> </table>	NAME	: Muhammad Fikri	STUDENTS	Hazmi Bin Abbas	YEAR	: 2 Red	AGE	: 9 Years	DATE	: 26 April 2024	TIME	: 7.40 morning until 8.40 in the morning	NAME TEACHERS	: Jevitha A/P Balakrishna	PLACE	: SK Tanjung Malim, Perak, Malaysia.	<p>First Respondent (R1) Level Hearing (70dB)</p> <p><i>Problem Language and speech</i></p> <p><i>Aspect first: phonology (A1-F)</i></p> <p><i>First aspect: phonology (A1-F) Second aspect – Morphology (A2 –M) Aspect third - Syntax (A3- S)</i></p> <p><i>Fifth aspect- Pragmatics (A5-P) Aspect the second – Morphology (A2 -M)</i></p> <p><i>Aspect first: phonology (A1-F)</i></p> <p>Aspect fifth- Pragmatic (A5-P)</p> <p>Fifth aspect- Pragmatics (A5-P)</p> <p>Aspect fifth- Pragmatic (A5-P)</p>
NAME	: Muhammad Fikri																
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PLACE	: SK Tanjung Malim, Perak, Malaysia.																
<i>OBSERVATION</i>																	
<i>PURPOSE OBSERVATION</i>																	
<p><i>Identify problem language and speech current process teaching and learning. This observation is also given to several aspects namely phonology, morphology, syntax, semantics, and pragmatic.</i></p>																	
<i>EVENT THAT NOTICED</i>																	
<ul style="list-style-type: none"> <li>• Students have problem language and speech which very bad.</li> <li>• Student difficult for identify sound letters which have pronunciation which almost same</li> <li>• Students say initial word regularly prolonged.</li> <li>• Replace quarter said another in words.</li> <li>• Using sentence regularly upside-down example: drink water called as water drink.</li> <li>• Always asking teacher repeat instructions</li> <li>• Always forget words.</li> <li>• Speech no clear current speaks in sentence long.</li> <li>• Difficult start conversation in activity group together friends’ classmates</li> <li>• Student very active current process</li> </ul>																	
<i>INTERVENTION 1</i>																	

teaching and learning. <ul style="list-style-type: none"> <li>Nope follow turn talk.</li> </ul>	
<b>NOTES / REVIEWS</b> <i>This student has language problems and speech very bad If, parties who is responsible for carrying out intervention regularly periodically, possibility students This can reduce language problems and speech.</i>	

**Table 3.** Anecdotal Record Analysis 2

<b>INSTRUMENTS ANECDOTAL RECORD 2</b>  <table border="1"> <tr> <td>NAME</td> <td>: Siti Naila Aleesya Binti</td> </tr> <tr> <td>STUDENTS</td> <td>Mohd Shukor</td> </tr> <tr> <td>YEAR</td> <td>: 2 Red</td> </tr> <tr> <td>AGE</td> <td>: 9 years</td> </tr> <tr> <td>DATE</td> <td>: 26 April 2024</td> </tr> <tr> <td>TIME</td> <td>: 9.00 morning until 10.00 in the morning</td> </tr> <tr> <td>TEACHER'S NAME</td> <td>: Jevita A/P Balakrishnan</td> </tr> <tr> <td>PLACE</td> <td>: SK Tanjung Malim, Perak, Malaysia.</td> </tr> </table> <b>OBSERVATION</b> <b>PURPOSE OBSERVATION</b> <i>To identify problem language and speech current process teaching and learning. This observation is also given to several aspects namely phonology, morphology, syntax, semantics, and pragmatic.</i>  <b>EVENT THAT NOTICED</b> <ul style="list-style-type: none"> <li>Student difficult for identify sound letters which have pronunciation which almost same</li> <li>Student hard sound consonant the end or prefix</li> <li>Confuse in usage words and meaning (we called as we)</li> <li>Nope smooth current talk</li> <li>Always asking teacher repeat instructions</li> <li>Difficult remember words which speak.</li> <li>Speech no clear current speaks in sentence long.</li> <li>Difficult start conversation in activity - collects classmate.</li> <li>Student passive current process teaching and learning.</li> <li>Always follow turn talk stutters, interaction by friends at in room degree.</li> <li>Always see picture or read from listen story.</li> <li>Difficult using language signal.</li> </ul>	NAME	: Siti Naila Aleesya Binti	STUDENTS	Mohd Shukor	YEAR	: 2 Red	AGE	: 9 years	DATE	: 26 April 2024	TIME	: 9.00 morning until 10.00 in the morning	TEACHER'S NAME	: Jevita A/P Balakrishnan	PLACE	: SK Tanjung Malim, Perak, Malaysia.	<b>Respondent Second (R2)</b> <i>Level hearing (90)</i>  <i>Problem Language and speech</i> <i>Aspect first: phonology (A1-F)</i>  <i>Aspect first: phonology (A1-F)</i>  <i>The fourth aspect of Semantics (A1-ST)</i> <i>The first aspect: phonology (A1-F)</i> <i>Fifth aspect- Pragmatics (A5-P)</i> <i>Aspect the second – Morphology (A2 M)</i>  <i>The first aspect: phonology (A1-F)</i> <i>Fifth aspect- Pragmatics (A5-P)</i> <i>Aspect fifth- Pragmatic (A5P)</i>  <i>Fifth aspect- Pragmatics (A5-P)</i> <i>First aspect: phonology (A1F)</i> <i>Aspect fifth- Pragmatic (A5P)</i>  <b>The third aspect - Syntax (A3- S)</b> <b>Aspect first: phonology (A1-F )</b>  <b>INTERVENTION 2</b>
NAME	: Siti Naila Aleesya Binti																
STUDENTS	Mohd Shukor																
YEAR	: 2 Red																
AGE	: 9 years																
DATE	: 26 April 2024																
TIME	: 9.00 morning until 10.00 in the morning																
TEACHER'S NAME	: Jevita A/P Balakrishnan																
PLACE	: SK Tanjung Malim, Perak, Malaysia.																

<p>NOTES / REVIEWS</p> <ul style="list-style-type: none"> <li>This student has language problems and <i>Very bad speech.</i></li> </ul>	
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Based on the analysis of table 3, the second respondent has language and speech problems in all five aspects only that is phonology, morphology, syntax, semantics and pragmatic. Respondent 2 has a dominant problem in the phonological aspect. Among them problem phonology which faced is difficult for identify sound letters which have almost the same pronunciation, difficulty sounding final or prefix consonants, no fluent when speaking, speech not clear when speaking in that sentence long, stuttering, and difficult to use sign language. The next problem is in terms of pragmatic which is always asking the teacher to repeat the instructions and the student's passive during the process teaching and learning. However, students also show mark positive in semantic skills such as being able to interact with friends in the classroom and constantly follow turn to speak.

According to justification which stated, get it answered question research first that is which sounded " Do hearing-impaired students have language problems from in terms of phonological, morphological, syntactic, semantic and pragmatic aspects?" Clearly visible respondents 1 and 2 who have hearing problems experience language problems from side its aspects based on the data record anecdot data between respondents 1 and 2. Respondent 2 have fifth- five aspects problem language and speech compared to by respondents 1. Besides that, level respondent 2's hearing is 90dB, while the respondent is only 70dB. Hereby, it can be concluded that the level of hearing has an impact on language problems and speech students problematic hearing. Based on table and details respondents get it answered question research the second that is " Do students problematic hearing suffer speech problems based on the level of hearing different?" Respondent 2 have level hearing which worse from respondents I then aspects acceptance inputs language more less compared to by respondent 1. Indirectly, the level of hearing affects the aspect language and speech. Respondent 2 have list problem language compared respondent 1.

### ***Instrument Analysis Checklist***

In research case this, we too using instruments list check for get data and information related to respondents. A total of 30 checklist criteria which include question related phonology, morphology, syntax, semantics, and pragmatic used. Analysis of results findings from list check is indicated in table 4.

If we see table 4, for criteria phonology, both respondents no can meet the criteria for S1, S2 and S3. For S4, S5, S6 and S7 they do not face problem except for respondent 2, he failed in S5 and S7. As for the criteria morphology, both respondents were unsuccessful for all questions except, respondent 1 was unsuccessful for S10 and respondent 2 was unsuccessful for S12. If seen for criteria Their syntax fails for all questions. Next the semantic criterion is seen they have problems for S20, S21, S24 and S25. Respondent 1 also has problem for Q22 while respondent 2 for question Q19. Finally for the criteria pragmatically, respondent 1 has problems for questions Q26, Q28 and Q30 while respondents 2 anyway have problem for the question Q27 and Q29.

Based on results findings list check this us can make conclusion that second- two respondents indeed face problem language for almost all of them criteria. Amount the score obtained is very high showing they face difficulties for now, understand and speaking again language. Only criteria pragmatic only has a slightly larger score difference which is 5 out of 10 total scores. This may be due to good social interactions at school and at home. Results analysis this clear once answered question first research us that is both respondents indeed have problem language from side phonology, morphology, syntax, semantics, and pragmatic.

**Table 4.** Instrument Analysis Checklist

No	Criteria	R1	R2	Amount
	Phonology			
Q1	Difficulty identifying sound	√	√	2
S2	Difficulty earnings speech (articulation)	√	√	2
S3	Usage pronunciation that is not suitable with meaning	√	√	2
S4	Problem removes words			
S5	Using lip reading to understand speech		√	1
S6	Problem input acceptance auditory and visual			
Q7	Fail using intonation and rhythm appropriate		√	1
	Morphology			
Q8	Difficult identify words which letters finally no emphasized	√	√	2
S9	A lot of change meaning original sentence in one content Sentence	√	√	2
Q10	Take time old for master skills mentioned. Words		√	1
Q11	Less using remuneration, the end / dropped it in usage sentence	√	√	2
S12	Late in make a combination word	√		1
Q13	Difficult make projection against sentences which is complex	√	√	2
Q14	Nope can write well	√	√	2
	Syntax			
Q15	Difficulty understands sentence passive & clause, using sentence. short & make grammar mistakes	√	√	2
Q16	Difficult build language and verse	√	√	2
Q17	Problem while using rule deep syntax speech	√	√	2
Q18	Fail give information which be required	√	√	2
	Semantics			
Q19	Difficult understand the word that have two meaning		√	1
Q20	Problems understanding figurative expression	√	√	2
Q21	Difficult organize & solve the problem	√	√	2
Q22	Measure categorizes information in group	√		1
Q23	A lot of them own words			
Q24	Difficult understand words that are more than one meaning	√	√	2
Q25	Less treasury said qualitatively & quantitative	√	√	2
	Pragmatic			
Q26	Passive current pair/group activity	√		1
Q27	Slow in understand speech/ instructions people another		√	1

Q28	Using the act of communicating	√		1
Q29	Nope follow turn to speak		√	1
Q30	Nope can explain reason if sad or disappointed	√		1

## Discussions

*The research question: Do students problematic hearing experience problem language from side aspects phonology, morphology, syntax, semantics, and pragmatic?*

Based on the justification stated in the research findings, the researcher has been successful in achieving the objective and question research drafted. The researcher already took two people students with problematic hearing from a school at state Island Pinang as study respondents and the study title is about language and speech problems. Research This is analyzed using a qualitative design that uses triangulated data ie data observation through instruments list check, meeting chat, and analysis documents using an anecdotal record instrument. The three displayed data were analyzed and found that hearing-impaired students have language problems in terms of aspects of phonology, morphology, syntax, semantics, and pragmatics (Rita & Handrianto, 2020; Wiefferink et al., 2020)

The first data is through interviews. A structured interview form is prepared and contains introductory questions, open questions, and closed questions to answer questions research. Based on a meeting chat by the teacher's education specialist school the said got information about respondent's research from a deeper angle view them. Perspective against respondents research especially in session learning and facilitation, teacher education special share experience said problem language and speech in all five aspects for sure exists in circle students problematic hearing caused by features, factor genetics, factor the environment (Arwin et al., 2022; Khairuddin & Miles, 2019).

The second data is through document analysis which is anecdotal records. Observations that are specifically and carefully made above each respondent's research. Based on analysis findings research through thematic then obtained respondents research experience problem dominant in phonology and pragmatics. The last data is through a checklist. There are five aspects of language the criteria listed and marked by teacher education special Through list check, it is said can see regularly specifically problem language and speech confronted by each respondent (Jizzakh, 2020; Sarte et al., 2021). Basically, overall, the data strengthen and give a picture realistic that students with problematic hearing experience language and speech problems in aspects of phonology, morphology, syntax, semantics, and pragmatics.

*The question 2: Do students problematic hearing experience problem speech based on level hearing difference?*

Results from the analysis of the findings acquired, we can conclude that the research almost answered all of the questions by using three types of instruments that is interviews, anecdotal records, and even checklists. Previously we have discussed related to the first research question. Now we discuss the findings for the second research question which is Do hearing-impaired students experience speech problems based on different hearing levels? Generally, results research that can answer this research question is through an anecdotal record instrument and list check (Krishnan et al., 2020; Sicam et al., 2021).

Through all three methods, we can conclude that the increasingly bad problem of the student's hearing becomes more and more difficult for him to speak well (Banseng et al., 2021; Fernández-Gavira et al., 2021). Students who have level hearing which is light and simple can speak if given intervention regularly while students with severe or relatively severe hearing need to get treatment immediately. Based on this study both respondents only experience a mild and moderate level of hearing so the recommendation for improving their language and speech is by



emphasizing speech and sign language so that students can communicate as well as students typically (Aldabas, 2021; Luft et al., 2022).

Collaboration with parents also plays an important role in helping the student's problem hearing in deal with disability them. Continuous education at home and at school can have a positive impact on the students the said. The students who got education and attention from their mother and father at home show progress which is better compared to student- students who receive education at school only (Blank et al., 2020; Zamsha & Adamiuk, 2020). Not only can increase potential progress it even increase confidence self the students the said. This clearly shows the collaboration between teachers and parents impact which is big in life the students are in need of special things such, as the teachers' need to build relationships which good for the mother and father in order welfare of the students this continue guaranteed.

## CONCLUSION

Through survey literature results from studies last, can conclude that language and speech problems among hearing-impaired students are a significant problem faced by them. Mastery of speaking skills will cause a delay in language development that has a relationship with confidence self them and so face problems for understand conceptsocial. By thing thus, activity teaching language and speech needs to continue to higher levels up to primary school education only because this process needs to have continuity in addition to ensuring the problem groups hearing feel them need master language speech. They need to be made aware of the importance of mastering spoken language so that they can communicate with society, further contributing to the progress and prosperity country.

## REFERENCES

- Aldabas, R. (2021). Barriers and Facilitators of Using Augmentative and Alternative Communication with Students with Multiple Disabilities in Inclusive Education: Special Education Teachers' Perspectives. *International Journal Of Inclusive Education*, 25(9).
- Antia, S. D., Lederberg, A. R., Easterbrooks, S., Schick, B., Branum-Martin, L., Connor, C. M., & Webb, M. Y. (2020). Language and Reading Progress of Young Deaf and Hard-of-Hearing Children. *Journal of Deaf Studies and Deaf Education*, 25(3).
- Arwin, A., Kenedi, A. K., Anita, Y., & Ciptro Handrianto. (2022). The Design of Covid-19 Disaster Mitigation E-Module For Students of Grades 1 in Primary School. *International Conference of Early Childhood Education (ICECE-6 2021)*.
- Banseng, S., Sandai, R., Handrianto, C., & Rasool, S. (2021). Language of strata and expression in construction of sampi amongst iban community in malaysia. *International Journal of Education, Information Technology, and Others*, 4(3),. *International Journal of Education, Information Technology and Others*, 4(3).
- Blank, A., Frush Holt, R., Pisoni, D. B., & Kronenberger, W. G. (2020). Associations Between Parenting Stress, Language Comprehension, and Inhibitory Control in Children With Hearing Loss. *Journal of Speech, Language, and Hearing Research*, 63(1).
- Creswell, J. W. (2014). *Research Design: Qualitative, Quantitative, and Mixed Methods Approache*. SAGE Publications.
- Fernández-Gavira, J., Espada-Goya, P., Alcaraz-Rodríguez, V., & Moscoso-Sánchez, D. (2021). Design of Educational Tools Based on Traditional Games for the Improvement of Social and Personal Skills of Primary School Students with Hearing Impairment. *Sustainability*, 13(2).
- Hanim, R. (2016). Increase Speech and Reading the Students Hearing Impaired Through the Picture Pronunciation Method. *Asian Education Action Research Journal*, 5.

- Jizzakh, T. G. K. (2020). Using Hearing AIDS in Determining the Level of Speech Development in Children with Hearing Impairment. *Mental Enlightenment Scientific-Methodological Journal, 1*.
- Khairuddin, K., & Miles, S. (2019). School Staff Members' and Parents' Experiences of the Inclusion of Deaf Children in Malaysian Mainstream Schools. *Education 3-13, 48*. <https://doi.org/10.1080/03004279.2019.1664403>
- Krishnan, I. A., Mello, G. De, Kok, S. A., Sabapathy, S. K., Munian, S., Ching, H. S., Kandasamy, P., Ramalingam, S., Baskaran, S., & Kanan, V. N. (2020). Challenges Faced By Hearing Impairment Students During Covid-19. *Malaysian Journal Of Social Sciences And Humanities (MJSSH), 5*(8).
- Luft, P., Fischgrund, J. E., Eardley, A., Tanner, C., & Reusser, J. (2022). Identifying Well-Prepared Teachers of Deaf and Hard of Hearing Students. *American Annals of the Deaf, 167*(2).
- Moore, D. R., Zobay, O., & Ferguson, M. A. (2020). Minimal and Mild Hearing Loss in Children: Association with Auditory Perception, Cognition, and Communication Problems. *Ear and Hearing, 41*(4). <https://doi.org/10.1097/AUD.0000000000000802>
- Moreno, M. A. (2015). Speech and Language Delays in Young Children. *JAMA Pediatrics, 169*(8).
- Rita, Y., & Handrianto, C. (2020). Strategi Pembelajaran Kooperatif Tipe Jigsaw dalam Penerapan Nilai-Nilai Kato Nan Ampek Pada Program Paket C. *Jurnal Pendidikan Dan Pemberdayaan Masyarakat (JPPM), 7*(1).
- Sarte, N. M. R., Santiago, B. T., Dagdag, J. D., & Handrianto, C. (2021). Welcome Back: The Return of College Dropouts to School. *Jurnal Pendidikan Dan Pemberdayaan Masyarakat (JPPM), 8*(2).
- Sawyer, J. (2017). I think I can: Preschoolers' Private Speech and Motivation in Playful Versus Non-Playful Contexts. *Early Childhood Research Quarterly, 38*. <https://doi.org/https://doi.org/10.1016/j.ecresq.2016.09.004>
- Sicam, E. B., Umawid, M. D., Colot, J. D., Dagdag, J. D., & Handrianto, C. (2021). Phenomenology of Parenting While Schooling Among Filipino College Student Mothers In The Province. *Kolokium, 9*(2).
- Su, J. Y., Guthridge, S., He, V. Y., & Howard, DLeach, A. J. (2020). The Impact of Hearing Impairment on Early Academic Achievement In Aboriginal Children Living in Remote Australia: a Data Linkage Study. *BMC Public Health, 20*.
- Tjandrajani, A., Dewanti, A., Burhany, A. A., & Widjaja, J. A. (2016). Keluhan Utama pada Keterlambatan Perkembangan Umum di Klinik Khusus Tumbuh Kembang RSAB Harapan Kita. *Sari Pediatri, 13*(6).
- Tomblin, J. B., Oleson, J., Ambrose, S. E., Walker, E. A., McCreery, R. W., & Moeller, M. P. (2020). Aided Hearing Moderates the Academic Outcomes of Children with Mild to Severe Hearing Loss. *Ear and Hearing, 41*(4).
- Walker, E. A., Sapp, C., Dallapiazza, M., Spratford, M., McCreery, R. W., & Oleson, J. J. (2020). Language and Reading Outcomes in Fourth-Grade Children with Mild Hearing Loss Compared to Age-Matched Hearing Peers. *Language, Speech, and Hearing Services in Schools, 51*(1).
- Wiefferink, K., Van Beugen, C., Wegener Sleeswijk, B., & Gerrits, E. (2020). Children with Language Delay Referred to Dutch Speech and Hearing Centres: Caseload Characteristics. *International Journal of Language & Communication Disorders, 55*(4).
- Zamsha, A., & Adamiuk, N. (2020). Principles of Designing Bimodal-Bilingual Educational Environment for the Deaf and Hard-of-Hearing Learners. *Knowledge, Education, Law, Management, 1*(34).