



Empowering teachers, empowering the nation: Developing an accessible training system for dyslexia in Indonesia.

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Abstract

This article reports a large-scale qualitative research project designed to increase awareness of dyslexia in Indonesia, in 3 phases, i) evaluating current knowledge ii) updating current knowledge and iii) providing in depth training and application of skills, and disseminating this knowledge more widely. A large-scale questionnaire study of 1781 teachers revealed a high degree of misunderstanding and belief in myths about dyslexia within the teaching population in Indonesia. In response to this perceived need, the Dyslexia association of Indonesia undertook the development and dissemination of a training course for teachers, over a 5-year period, originally designed to be delivered in person, but most recently delivered online in 2021, in response to the limitations of Covid. 894 teachers in all benefitted from this training, delivered over 28 sessions. Participants were asked to commit to attending regularly, and completed a questionnaire survey, and reflection on the course. Those who had achieved solid results from this initial training, based on the criteria of regular attendance and improvement on scores in understanding dyslexia, were invited to join a more focused in-depth bursary funded dyslexia workshop. Finally, the trained teachers were invited to disseminate their knowledge more widely, and seven teachers elected to set up their own seminars and workshops, and work on individual education plans for children that they taught. In this article, the potential of this approach is discussed for reaching a wider population of teachers in a country spanning an area equivalent to an eighth of the earth's circumference in scattered islands, This approach has the potential to increase dyslexia awareness and understanding, and ensure that appropriate support for dyslexia can be provided more widely in Indonesia.

Keywords: Indonesia, dyslexia awareness, teacher training, dissemination

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INTRODUCTION AND BACKGROUND – THE NEED FOR TRAINING

Dyslexia has not yet been recognized in Indonesia in terms of legislation and is typically equated with learning difficulties or intellectual disability. Moreover, there are no special terms for dyslexia in the general school system, and children may be presented with a simplified curriculum based on misunderstanding of dyslexia, its causes and treatment (Dewi, 2021 in press). This has meant that the prospects for children with dyslexia in Indonesia have remained poor, and there is little public awareness of the strengths and weaknesses of dyslexia.

Over many years the Dyslexia association of Indonesia (DAI), founded in 2009 by professional parents, has sought to disseminate awareness of dyslexia including both educational and medical aspects to parents and teachers, in order to combat this lack of awareness and ensure a better outcome for children with dyslexia. The authors base their understanding of dyslexia on the literature from the UK and USA (e.g. Shaywitz and Shaywitz, 2003, Vellutino et al., 2004) including aspects such as phonological skill, fluency, and working memory, which advocate multi-sensory techniques for intervention, coupled with a broader awareness of problems in learning in dyslexia derived from the work of Fawcett and Nicolson (e.g. Nicolson and Fawcett, 2007). The authors academic knowledge is enhanced by their personal experience of working with many cases of children with dyslexia over the years in their school and clinic in Bandung, where they deliver a whole child approach to learning. Here they deliver programmes which emphasise written and spoken language, following instructions, issues with directions and learning the time, as well as phonological, working memory and mastery support (Solek and Dewi, 2013). In line with its mission and vision, the Dyslexia Association of Indonesia (DAI), has put in enormous effort in order to educate and empower the teachers in Indonesia, and work closely with them as they are the front liners who would initially recognize the learning difficulty issues in the field. In order to clarify the initial awareness of teachers in Indonesia, where there has been little recognition of dyslexia within teacher training or within the school system, in phase 1 of this research, they undertook an ongoing survey based on that previously delivered to parents, this time delivered to teachers.

The DAI also noted the findings taken from the survey previously distributed by the DAI to parents, that included a number of myths regarding dyslexia, and that these remained widely accepted based on a lack of knowledge of the research associated with dyslexia internationally.. A number of myths about dyslexia have been noted for some years in the literature, from the UK and USA, (Riddick, 1995). These include ongoing arguments on whether dyslexia really exists, (Elliott and Grigorenko, 2014, see Nicolson, 2005 for a different view), if it differs from other learning disabilities and requires different intervention, whether it reflects some inadequacies in the parents themselves, or whether it is simply an excuse from middle class parents seeking a suitable label to cover the low ability of their children (Riddick, 1995).

In terms of intervention, a number of approaches have been suggested over the years, with some designed to address issues such as self-esteem, and others more directly focused in reading itself. In Indonesia, lack of awareness and understanding of the problems of dyslexia has led to a number of myths, specific to the local context in Indonesia, in terms of intervention and cures. These myths, as well as some recognized facts about dyslexia were included in the questionnaire survey to identify levels of knowledge in teachers at the start of the research.

METHODS AND PARTICIPANTS.

The teacher survey was undertaken using simple questionnaires that consisted of several questions, outlined below covering both educational and medical aspects of dyslexia, as well as approaches to intervention. The total number of teachers participating by September 2021 were 1,781 teachers, (Dewi, 2019) who originally came from various places in all of the larger islands of Indonesia, which included the following: Sumatera Island, Java Island, Borneo Island, Bali Island, and Nusa Tenggara Island. Most of them (92%) were women, two thirds of them were in the age range 20-40 years old. Approximately 70% of them held bachelor degrees, and 40% among this group took Education as their major in faculty. More than half (56.2%) were nursery teachers, 28% were primary school teacher and the rest were teachers from secondary school, special school (for Intellectual Disability) and home-schooling bodies. Fifty two percent of participants said that they had students with dyslexia in their classes, and 76.4% of the teachers said that they have as many as 1-3 students with dyslexia in their classes. Unfortunately, 70.7% of teachers had never heard about the existence of Dyslexia Association of Indonesia and therefore had little expertise in dyslexia.

RESULTS

Phase 1 Survey

Key points addressed in the survey related to both educational and medical aspects of dyslexia. One myth arising in Indonesia was based on the perception that dyslexia was caused by a poor diet, whereas another implicated hypotonia and problems with spine. Attributions included poor parenting, poor teaching and disinclination to learn in the child themselves. Overall, 31.5% of the participant agreed with the myth that dyslexia was due to poor diet, hypo tonic muscles, and spinal problems. This belief is based on the posture that many dyslexic children adopt when asked to write or spell, and slumped across their desks, while hypertonia is linked to holding the pen awkwardly. Sixty two percent believed that dyslexia is a genetic-based condition, which is supported by family studies over the years, while 38% believed erroneously that dyslexia is variously due to poor parenting, poor teaching, gadget exposure or that the child was having too much fun on his own and therefore preferred not to engage with education, or maternity illness, and impairment of the back spine. Almost 24% of the teachers thought incorrectly

that the intelligence level of dyslexic student is below average. Only 16.2% of participants supported remedial educational therapy for dyslexia, and the rest suggested other untried therapies, for instance: massage, music, hiking, riding dolphins, meditation, and a natural setting. These therapies would be instrumental in improving the self-esteem issues associated with dyslexia, but are not specifically designed to improve the educational difficulties that prevent the development of potential for dyslexic children.

Phase 2. The Training Programme

Considering the gap in understanding of dyslexia that teachers showed from this survey, in terms of both origins and interventions for dyslexia, the DAI decided to conduct training programmes that would update and fulfill the needs of the teachers regarding child development and comprehensive management of students with dyslexia. It was important that these programmes were easily understandable and friendly, in order for the knowledge obtained to be applied in the classes on a daily basis. The programme was always preceded by a more general seminar on dyslexia, which participants were invited to attend. It was understood that many of the teachers might not be able to join the program due to the cost if they had to allocate some funds to pay for the training programme, therefore the programs were set up as a bursary programme. This means, there were some terms and conditions for the teachers to be eligible to join the programme, based on their commitment to attend regularly, complete the programme and submit the associated exercises. Once, they were deemed eligible, then all the operational cost was borne by the association. The funds used by the association to conduct this bursary program were from internal parties as there were no external sponsors at all. However, in its fourth batch, which was run in 2021, the association received support from a Child Care Community based Non-Government Organisation based in Jepara (a small city in West Java). The NGO name was KOMPAK and its leader had sponsorship from the Australian Government through the Alumni Grant Scheme (AGS) as she was an alumni of the Australia-Indonesia Moslem Youth Exchange Program (AIMEP) in 2014.

METHODOLOGY

Time Line

DAI has conducted 4 batches of The Bursary Programme for Teachers. The first three batches were run in offline settings in Bandung (2017), Jakarta (2018) and Aceh (2019) (Dewi, 2020). The fourth one was run online using the zoom platform in 2021. In the training programs that took place offline, the targeted teachers were teachers who were in the area where the training took place and its surroundings. The place used to hold the training were the function rooms provided by some schools that were willing to collaborate with DAI to support this event. In the fourth batch, the participants came from various regions in Indonesia (51 cities from many islands), not only focusing on one

location or area. This was only possible because the training was conducted online due to the pandemic situation. On top of that, this online setting allowed more participant capacity because it was not limited by the venue capacity.

Algorithm of the Bursary Program

The bursary program was always preceded by a general seminar for the public. The public seminars were unsurprisingly attended by many participants and all were enthusiastic to learn more about dyslexia. This was welcomed by the association with an offer to join the Bursary program. Interestingly, those who were interested in signing in to this program were not only teachers, but also parents, lecturers, health professionals (doctors, midwives, therapists), psychologists, as well as Organizers of the Special Needs Child Therapy Centers.

The bursary program was held in two parts. The first part was called the Education Class, while the latter one was called the Bursary Class. As mentioned earlier, in the Education Class, the participants were still varied in term of their professional background, however most of them were teachers. In this programme, there were 10 modules that were delivered to the teachers. All of these modules explained the normal developmental milestones of a child, covering the areas of gross motor development, fine motor skills, language, social interaction, cognition and personal skills in carrying out daily activities. Many participants initially questioned why they should study these topics, because they thought that they were taking this program to learn about dyslexia only. But as soon as they started learning these topics, they immediately came to understand that these topics were the science that underlies the science of dyslexia comprehensively, because in order to understand how dyslexic performance differs, it is necessary to understand normal developmental processes in learning and skills.

Table 1. The Education Class For Teachers

EDUCATION CLASS FOR TEACHERS	TRAINING			
	MODULE	SESSION	HOURS	NUMBER OF PARTICIPANTS
FIRST BATCH	10	10	25	258
SECOND BATCH	10	5	25	192
THIRD BATCH	10	5	25	200
FOURTH BATCH	16	8	36	244

As we can see from Table 1, there were 10 modules given in the Education Class, and delivered in 5 to 10 sessions, or approximately 25-36 hours in total. Particularly in the fourth batch, there were more modules provided in the training, but this was actually a

modification of the settings for the implementation of the training conducted online. The number of the sessions depended on the availability of both the function halls and the local steering committee. The number of the participants were approximately about 200-250 persons. The first three batches of training, were done off line in Bandung, Jakarta and Aceh, started in 2017, 2018, and 2019 consecutively. The fourth batch was done in 2021, and was the first one to be done online via the zoom platform, and therefore the participants came from a wide range of places in Indonesia.

In every session of The Education Class, the participants had to fulfil the pre-tests and post-tests, and write reflections upon the modules that had been taught in the session. This reflection was intended so that participants were able to understand the material more deeply because by writing their reflections, the participants needed to reread and process the material. Participants were also indirectly required to be able to perform critical analysis, evaluate, synthesize information, and reflect. With this reflection task, participants were also encouraged to always listen to the explanations of the speakers carefully, because often reflection questions were generated from the statements of the resource persons and were linked to previous materials. Through those assignments (pre-tests, post-tests, reflections), the organizers were able to supervise and monitor the understanding level of the participants and how well the material presented by the resource persons were digested. In this Education Class, participants were also subject to strict rules regarding attendance where they were required to always be present on time, not to be absent in the middle of the training, and also not to be off their camera nor leave the meeting room before the event was over.

Phase 3. The Bursary Class

To continue to the next training level, there were terms & conditions that must be met by participants to be eligible to join the Bursary Class. Participant screening was carried out through an assessment of attendance compliance, pre-test and post-test performance, and the quality of reflection.

Table 2: The Bursary class for teachers

BURSARY CLASS FOR TEACHERS	TRAINING			
	MODULE	SESSION	HOURS	NUMBER OF PARTICIPANTS
FIRST BATCH	24	6	42	32
SECOND BATCH	24	6	42	52
THIRD BATCH	24	6	42	45
FOURTH BATCH	26	14	63	94

As we may see from Table 2, in The Bursary Class, the number of the participants were considerably reduced to 15-30% of the number in the Education Class. There were 24 modules given in 6 sessions that took 42 hours of learning in total. And in the fourth batch, the modules were chunked into 26 modules that were delivered in 14 sessions that took 62 hours of learning in total. In the Bursary Class, participants learned in great detail how to deal with dyslexic children. Actually, this Bursary Program was more accurately described as a workshop because a great deal of the material taught was in the form of skills that can be applied hands-on in the class. The material provided included an explanation of the identification of cases of general learning difficulties and specific learning difficulties, differentiating between Delayed Development and Intellectual Disability, The Milestones of Dyslexia across the life span, Executive Function, Learning Strategies for Students with Dyslexia, Multisensory Approach Learning, Phonemic Awareness, Reading Comprehension, Socio-Emotional Problems in Dyslexia, Best Practice of Parenting for Children with Dyslexia, Handwriting and Dysgraphia, Dyscalculia, Comorbidities of Dyslexia, i.e.. Dyspraxia, ADHD and Giftedness. Furthermore, participants were also taught to set up an Individual Education Plan (IEP) and to familiarize themselves with using the compute-based "Indonesian Early Identification Tools for Dyslexia" programs that were developed by the Dyslexia Association of Indonesia (Dewi et al, 2018, Saputra, 2015, Saputra, Alfarozi and Nugroho, 2018). After completing the Bursary Programme, it is hoped that the participants will have better skills to manage dyslexic children at school.

Similar to the Education Class, in this Bursary Program participants were also asked to complete the pre-test, post-test and write reflections on each training session. At the end of each Bursary Class, we gave awards as a token of appreciation to participants who showed good reflection writing, who were active in discussions and who showed the best test results. Surprisingly, the participants also gave us feedback in the form of praise and gratitude for the opportunity they were given to be able to learn in this Bursary Class. In the closing ceremony of this Bursary Programme, teachers often said that they still wanted to always be in one community that was under the guidance of the association. Therefore, at the end of the fourth batch of Bursary Program, a new community called the Dyslexia Teacher Support Group was formed. The existence of this community was expected to be a consistent learning medium for teachers, a medium for sharing information among them, and for updating knowledge from competent resource persons from the association.

RESULTS

End of project quantitative evaluation

At the end of the programme, a brief survey was completed among all the participants, and the speakers, as well as the steering committee.

Table 3. Satisfaction with the programme

	Very satisfied %	Satisfied %	Overall
Satisfaction with the course	82.6	8.7	91.3
Duration	62.9	37.1	100

The survey questioned the content quality, the power point slides, duration of the symposium, how the resource persons conveyed the material, the topics presented, how beneficial the program was and how well the steering committee worked. All participants believed that this activity has a significant impact on improving the understanding of dyslexia of both teacher and community understanding of dyslexia.

QUALITATIVE EVALUATION OF THE PROGRAMME

Strengths

We also asked the participants what good things they could learn from the activity. From the perspective of the teachers, they felt that this program has widened their perspectives in terms of their understanding about dyslexia and other related learning difficulties, as well as their knowledge about general child development that led them to a more comprehensive skill in managing their classes, particularly in dealing with students with dyslexia. Many of those teachers hoped that they could take a wider role in educating society in the future because they realized that there were too many myths and misunderstandings in the field. From the perspective of the resource speakers from the DAI, they felt an extraordinary experience because at the same time they could share their knowledge and experience while also learning from each other with other resource persons and continuing to pick up various facts in the field presented by the teachers. As professionals, their horizons become wider when teachers convey many factual things that are happening in the community and at school. Professionals have acknowledged that with this online training setting, they have succeeded in reaching teachers from any region in Indonesia, including even remote areas. In addition, they feel very grateful and proud to be able to play a role in this excellent program. We also asked the same question to the executive committee from the association and also from the KOMPAK team. They said that they learned a great deal from the organization of this activity, where they saw the enthusiasm of the speakers in delivering the material presented in detail and comprehensively, in a language that was easily understood by the teachers, so this was received with great enthusiasm too by the participants eager to continue to learn the material presented.

Areas for improvement and continuation

As part of the feedback, we asked all participants about the things that were still felt to be lacking in the implementation of this program. From the perspective of the teachers, they felt that the duration of learning per session was very time consuming and draining of their energy. They proposed improving time management arrangements in this regard. Other than that, they still look forward to having an offline hands-on workshop with DAI once it is possible because they felt that some hands-on skills were less effective if they were not practiced offline. On top of that, they strongly proposed the need for regular remedial lectures from the resource persons in DAI to keep their knowledge updated. All resource persons, including the organizing committee, suggested a good digital log book so that they could document various activities in the Community Service program. This would certainly help the resource persons to assist the activities of the teachers in the community. They also hoped that this excellent program can continue to be sustainable with the support of attention and funds from sponsors, both from the government and the private sectors.

Online or offline

Finally, especially for the participants who participated in this program in the last batch, we asked their opinion on what they felt regarding the difference between offline and online training. All of the participants stated that the content of the material presented was no different, in fact there was always an update in each batch. However, they felt that offline training was always easier to understand because a lot of material was followed by hands-on practicum. In addition, the participants felt a very close relationship in the offline setting. This close relationship was also felt by both the speakers and the executive committee.

LIMITATIONS AND DIRECTION FOR FURTHER RESEARCH

In future research, the authors recognize the need to obtain direct quotations from the participants which could be included in the article, in order to enrich understanding of the impact that the bursary programme had on those who were able to take part, in addition to qualitative material of the type presented here.

One key aspect that was identified and has been followed up in ongoing research, is the need to maintain and update knowledge on dyslexia. Building on the format adopted with the dyslexic parents group in Bandung, it was agreed that selected participants who had shown a special commitment to the programme should be encouraged to continue sharing awareness with others, building in an extension programme which was designated the Community Service programme, and is outlined below.

THE COMMUNITY SERVICE PROGRAMME

In order to maintain and ensure that the knowledge delivered by the association is truly and correctly applied to the community (especially to dyslexic children), the Dyslexia Association of Indonesia encouraged the participants to spread this knowledge by carrying out activities called community service. Community Service Activities consist of: (1). Educating and sharing knowledge of dyslexia to their respective communities, (2). Using the dyslexia early screening tool developed by DAI, (Dewi et al, 2018) (3). Identifying cases of general learning disability and specific learning difficulty, (4). Setting up Individualized Education Plans, (5). Executing the IEP and (6). Giving feedback in an evaluation session from the resource from the association.

Currently, several participants (7) have started to make presentations to their respective communities, which include schools, religious communities, and local authorities, as well as to the public. This Community Service Program was set to be completed within one year after the closing of The Bursary Program. It is hoped that by that time there will be many more teachers, parents and communities who would understand about dyslexia. This knowledge of dyslexia will continue to roll on like a snowball effect, getting bigger and bigger all the time, reaching more and more people in Indonesian society to develop a greater understanding of dyslexia.

CONCLUSIONS

In this research we identified the need for greater understanding of dyslexia in teachers in Indonesia, in response to a survey of 1781 teachers. This survey indicated that not only was there an acceptance of some of the more general myths on dyslexia, such as reflecting low intelligence, poor parenting and teaching, but also some of the more idiosyncratic myths highlighted by earlier research with parents of dyslexics in Indonesia. This indicated a low awareness of the importance of educational intervention, with a preference for approaches such as swimming with dolphins or engaging with nature, interventions designed to improve self-esteem and executive function, but not necessarily to improve the educational impact of dyslexia. In response to this perceived need, we delivered a series of seminars and bursary classes in 2 phases, to provide general information on normal development and more in-depth information on identifying dyslexia and creating an individual development plan. The project was well received, with 894 in total completing the training, with the final tranche delivered remotely during the pandemic. Participants agreed that it was the most useful to meet in person, given the opportunities associated to implement and evaluate skills acquired. However, it was also clear that running the programme on line had considerably extended the numbers able to benefit from this approach. A lasting legacy of the training was the creation of a new support group for the DAI, coupled with community service from 7 participants who took it on themselves to become more deeply involved in their own regions, which is outlined in directions for further research above.

It is true that raising awareness was not easy at all. Not only should it incorporate theories and practices but also be coupled with a supporting system to gain better and faster outcomes. However, all the participants believed that this program was like a treasure trove of educators, providing knowledge beyond the comfort zone that could only be obtained with great genuine effort and determination. And because the teacher is the spearhead of change for his students, the teacher must not stop learning and renewing his knowledge. All we did was touch one heart to touch many more and to make a big difference in helping these special kids. We learn, we share and we help! In the end, DAI believes that this series of activities to educate teachers is one of the best efforts to empower the nation. It is very proud that the Dyslexia Association of Indonesia has taken an important role in this effort, and hopes to build on this approach in future research. The approach has considerable potential for use in countries where there is a need to update and maintain knowledge of dyslexia and other conditions, building on sound research developed internationally.

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