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General Education Teachers' Perspectives on the Effectiveness of Dyslexia Identification and the
Potential Use of Teacher Administered Screening Tests

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Abstract

Dyslexia is a learning disorder with symptoms that greatly impact students in educational settings and these impacts can extend beyond the walls of school into everyday life. Progress has been made to identify and accommodate more students with dyslexia, but students still are diagnosed late into their schooling or go undiagnosed. To evaluate this problem, this study was designed to turn to general education teachers in Ohio with a survey. The survey looks at general education teachers' knowledge on dyslexia and the dyslexia identification process, the impact undiagnosed dyslexia may or may not have in the classroom, and the teachers' opinions on the potential use of a teacher administered screening test to recommend students for further dyslexia assessment. This survey was not able to be administered due to unforeseen circumstances of COVID-19. However, this study is explained in great detail for potential replication of the study and to inspire further research on this topic.

**General Education Teachers' Perspectives on the Effectiveness of Dyslexia Identification
and the Potential Use of Teacher Administered Screening Tests**

Dyslexia is a well-known disorder that is commonly referenced in educational settings, popular culture, and everyday conversations. Despite the familiarity of the disorder, many still view dyslexia as a disorder in which those affected simply read numbers and letters backwards. Dyslexia involves much more than these symptoms. It is categorized as a specific learning disorder by the International Dyslexia Association (Phillips & Odegard, 2017) and is best defined as a language-based learning disorder resulting in literacy difficulties due to processing differences. Problems resulting from dyslexia include problems with decoding words, word recognition, reading comprehension, spelling difficulties, and writing difficulties (Handler, 2016). In addition to these symptoms, students with dyslexia tend to exhibit poor academic achievement, poor self-esteem, reduced chances of high school and college graduation, and potentially increased risk of incarceration when compared to students without dyslexia (B. Cassidy & L Cassidy, 2019). Dyslexia can have an impact on individuals that reaches far beyond schooling, and into everyday life. Dyslexia is the most prevalent learning disability (Handler, 2016) and therefore its impact on individual students, the classroom environment, and school systems should not be ignored.

The identification of dyslexia is not a process that can be perfectly laid out. There are many factors that can impact the identification and diagnosis processes, many individuals in collaboration during these processes, and steps that need to be taken. Parents or teachers may notice risk factors or signs for dyslexia. The dyslexia risk factors or signs should be noticed in school and the school should take appropriate steps to diagnose and/or accommodate the child. If this does not happen, and risk factors and symptoms are noticed first in the home, parents may

have to initiate an assessment with the school or with a third party (Reid & Guise, 2019). In schools, children at risk are provided intervention to look for improvement before a formal evaluation is performed. Response-to-intervention measures (RTI) are used to determine if a child is responding to provided intervention. (Lindstrom 2018). If a student does not respond to intervention or is recommended for testing by the school or a third party, an assessment is done to determine a potential dyslexia diagnosis. This step within the process is important because the result of the assessment determines what services a student is eligible for. According to the Individuals with Disabilities Education Act (IDEA), a student must be identified as having a disability recognized by the IDEA and the student must demonstrate an emotional need for services (Lindstrom 2018).

Services provided by the school because of the assessment process can be very beneficial to dyslexic students and can help them succeed. Services for students with dyslexia are typically implemented through an individualized education program (IEP) or a 504 plan. Both can ensure that appropriate accommodations and modifications are put in place to help a child succeed despite their disability (California Department of Education, 2017). It is important for students with dyslexia to receive the appropriate services to help them succeed in school leading them to successful lives after schooling is completed. It has been shown that students diagnosed with dyslexia later have lower perceived general competence and lower perceived academic competence than those diagnosed with dyslexia earlier. It has also been shown that dyslexic students who are never identified have extremely low self-esteem, partially because they never received adequate services to help them succeed. (Battistutta, Commissaire, & Steffgen, 2018).

The importance of early identification and early intervention is not lost on school systems and states across the country, which continue to try to improve the dyslexia identification system

and increase early intervention. There has been progress in identifying children who are at risk for reading difficulties through new measures to identify risk factors and the expanded use of RTI to track students' progress (Christo, Davis, & Brock, 2009). The state of Ohio facilitated a Dyslexia Pilot Project to help school districts across Ohio implement early identification and intervention measures of dyslexia, The evaluation suggested that students were positively responding to measures put in place from this project (Morrison, Collins, & Hawkins, 2016).

Early identification measures for dyslexia are not always effective. As of 2012, 13.4% of the student population had late-emerging reading disabilities or were late-identified (Catts, Compton, Tomblin, & Bridges 2012). Early identification measures either do not work for the portion of the population with late-emerging reading disabilities and for others the measures were simply not effective. Looking at implementations at the state level, it was found that in Texas and Arkansas, two states that had passed state legislation to improve the identification of dyslexia in public schools, there was no increase in the identification of specific learning disabilities and there was a low number of identified dyslexic students after the legislation was passed (Phillips & Odegard, 2012). Although some early identification implementations are likely more effective than others, new options need to be considered to effectively identify dyslexic students as early as possible.

Noticeably missing from literature on dyslexia identification is the utilization of general education teachers. General education teachers spend the most time with their students during the school day and would likely notice signs and risk factors associated with dyslexia to refer a student for further testing, if the teacher is educated about dyslexia. It has been suggested that teacher ratings may be a valid screening tool for dyslexia (Snowling, 2013), but little to no

further research has been done on the topic. A general education teacher administered screening test could be utilized to refer students for further assessment and potential dyslexia diagnosis.

This study was designed to survey general education teachers in Ohio to identify their familiarity with dyslexia signs and symptoms, to see how undiagnosed dyslexia may or may not affect their classroom, and to get their opinions on the potential usefulness of a teacher administered dyslexia screening test. General education teachers in grades third - eighth were to be recruited from public school districts in Ohio to take the survey. The results would determine the depth at which general education teachers in Ohio were knowledgeable about dyslexia, how much of a problem undiagnosed dyslexia causes for them in their classroom, and if a general education teacher administered screening test would be effective, all from the perspective of general education teachers. Since general education teachers spend so much time with their students, it was expected that they would see the value in a general education teacher administered screening test. While this study would be able to directly impact policy on dyslexia identification, the hope was that it could add to the existing literature and provide a new perspective on the topic.

COVID-19 had a monumental impact on the implementation of this study. The sponsoring institution, Bowling Green State University (BGSU), moved to remote learning to combat the spread of COVID-19, which complicated the Institutional Review Board (IRB) approval process and close collaboration with advisors. The state of Ohio had K-12 schools first move to remote learning for three weeks, and continued to extend the remote learning until it was decided to have K-12 schools move to remote learning through the remainder of the school year. Discussion between the researcher and project advisors determined that appropriate response to the survey could not be obtained under these conditions. After consulting with

project advisors and the BGSU Honors College, the following study is outlined as it would have been completed. Hopefully, this project can be replicated or used to inspire further research on this topic since it was unable to be completed as planned.

Materials and Methods

The materials and methods that would have been used had the study been able to proceed according to plan are described.

IRB Approval

Before moving forward with the study, IRB approval would have needed to be obtained. The IRB is the administrative and decision-making body having responsibility for review and approval of research involving human subjects (Institutional Review Board (IRB), n.d.). This study would have applied for “Exempt 1” review because the survey would be conducted in an accepted educational setting and would look at normal education practices. First, the primary researcher completed the CITI Program Course: Social and Behavioral Conduct of Research for appropriate Human Subject Review Board training. The certificate of completion can be viewed in Figure 1. To apply for IRB approval, an “Application for Approval of Research Involving Human Subjects” must be submitted. Access to the completed application that would have been submitted for this study can be found in Appendix. With the completed application, other important documents would need to be submitted. An Informed Consent Letter on official BGSU letterhead would need to be included to show the IRB that appropriate consent is being obtained. Access to this letter can be found in Appendix. The Recruitment Letter would also be submitted to the IRB approval. For this study, the Recruitment Letter would be the email that was sent with the survey attached to general education teachers. Access to the Recruitment Letter can be found

in Appendix. Lastly, the survey questions would need to be submitted to the IRB for approval before being sent to participants. Access to the survey questions can be found in Appendix.

Due to COVID-19 and the altered timeline and format for the study, the IRB Application and submitted documents were not submitted to the IRB and IRB approval was not obtained. It is likely that through the IRB process on or more of the components for this study would have needed to be altered to obtain approval. The researcher would have made appropriate changes to obtain IRB approval before moving forward with the study.

Participants

The population that was intended to be observed in this study was Ohio general education teachers currently teaching in grades third – eighth. This population was chosen because the researcher and the supporting institution are in Ohio, and the researcher is most familiar with the Ohio school system and policies. The grade range was chosen because third grade is when curriculum involving reading and comprehension intensifies, so student with dyslexia should have been identified before or in third grade to have the most success in future school. Eighth grade, in most school districts, is the grade before students move to high school, and entering high school with an unidentified learning disability is extremely challenging. This grade range is most significant when looking at unidentified dyslexic students, and a potential general education teacher administered screening test could be most useful in this grade range to interfere and identify students before they move on to higher grades.

Five hundred general education teachers' names and emails were collected from public information made available by school districts in Ohio. The goal was to receive responses from 100 participants. The website EducationBug is a public website that was used to ensure that

school districts across Ohio were chosen. Once a school district was chosen, general education teachers names and emails were obtained through public sources provided by each school district. Fifty school districts across Ohio were chosen and 8-12 teachers from each school district were chosen to be recruited for this study. It was intended to have a fairly even split between the grade levels being surveyed. The recruitment list has not been included to ensure confidentiality (as it would have been if the study were executed to plan). Each participant would have been asked two demographic questions: “What school district do you teach in?” and “What grade do you teach?”. These questions were not asked for identification purposes, but to categorize responses by Ohio region and grade level of educators to look for patterns.

Had the study been completed as planned, all participant information (name, email, and survey responses) would have been kept confidential on a password-protected computer in the password-protected Qualtrics server. The researcher would have been the only one to have access to the information.

Survey

The survey questions can be found in Appendix. The survey was developed using Qualtrics provided by BGSU. The survey would have been distributed by email to recruited general education teachers.

After consenting to participate in the study, participants would have been asked to provide the school district they teach in as well as the grade they currently teach. These demographic questions were not used for identification purposes, but rather with the intent of organizing responses by geographic region and grade level to look for patterns in responses. The survey then utilized multiple-choice questions, scaled questions, and open ended questions to

gather the teachers' familiarity with dyslexia, their familiarity with the dyslexia identification system, the effect undiagnosed dyslexia may or may not have on the classroom, and their opinion on the potential effectiveness of a general education teacher administered screening test. There was up to thirteen questions in the survey and was estimated to take 10-15 minutes. Results from the survey would have been recorded in Qualtrics.

Procedure

After submitting and receiving IRB approval, the survey would have been sent by email to the five hundred recruited general education teachers. The Recruitment Letter would have been the body of the email, the Informed Consent Letter would have been attached to the email, and the survey would have been linked in the body of the email. Two weeks after the initial email had been sent, a reminder email with the same attachments and links would be sent to the recruits to remind them about the survey. Four weeks after the initial email had been sent, the second and final reminder email with the same attachments and links would be sent to the recruits. The survey would remain live for one more week. A draft of the Reminder Email can be found in Appendix. The survey would then be closed, and the results would have been analyzed to attempt to draw conclusions from the survey.

Results

Due to COVID-19 and the adjustments made to both BGSU's school year and the K-12 school year, there are no results for this survey as it could not be administered. The goal of the survey was to receive one hundred or more responses. The responses would have been recorded in Qualtrics. Once the survey was closed and no longer accepting responses, the analysis of the

responses could have begun. Statistical Analysis System (SAS) is a statistical program provided by BGSU. SAS would have been used to complete the statistical analyses of the results.

For the multiple-choice and scaled questions, the results would have been broken down into percentages for each answer and compared to analyze the views of the overall sample. SAS would be useful in creating pie charts to show the results. The open-ended questions would have been categorized based on topic or viewpoint, and the responses could have been compared in a pie chart or bar graph created in SAS. T-tests would have been utilized to compare the differences in groups based on geographic region and grade level taught. The t-tests are used to see how significant differences between groups are. Running t-tests in SAS would have been useful to compare the responses between the difference groups that would have been broken down.

If the Spring Semester and this study had been able to be completed as normal, resources at BGSU, such as the advisors for this study, would have been utilized to ensure that the appropriate analyses were being completed on this data. It is likely that more in depth and descriptive tests could have been run through SAS to analyze the data, but it is difficult to know which processes would have been best without having any data.

Discussion

This study was created to fill a gap in the literature on dyslexia identification and general education teacher's perspective on this process, and to see if general education teachers would find a general education teacher administered screening test useful. It was hypothesized that general education teachers would find a general education teacher administered screening test beneficial, because general education teachers are spending the most time with the students each

day, and would likely be the first to notice risk factors and signs of dyslexia in their students. A general education teacher administered screening test for dyslexia has the potential to benefit the dyslexia identification system. A simple test that could be administered by a teacher to a student during a break in the school day is an easy first step to be added to this process. If a teacher notices reoccurring dyslexia signs or prominent risk factors for dyslexia in a student, they could administer the test and the score can be passed along the intervention department to determine if further testing should be done. In theory, this process could help decrease the amount of late-diagnosed or undiagnosed dyslexic students that struggle through school every day.

Each group of questions on this survey was designed to help show the need for a screening test of this kind and to prove that it could be developed in utilized in the current school system. The first group of questions asked the general education teachers to rate their familiarity with dyslexia as a disorder and the identification process of dyslexia. This group of questions was necessary to show whether general education teachers have the knowledge, as well as the confidence in their knowledge, to be able to identify signs and risk factors of dyslexia in their classroom. Their knowledge of the dyslexia identification system was also to be collected to know if their opinions on the effectiveness of the current system was based on understanding of the process, or confusion of the process.

The second group of questions asks general education teachers if they had suspected one or more students to have had unidentified dyslexia in their classroom throughout their teaching career. The questions then ask to what degree undiagnosed dyslexia had affected their classroom and teaching style. These questions are important for this study because it would show the need for a change in the system. If teachers responded and said that undiagnosed dyslexia had a

significant impact in their classroom, it would show that the current system is not as effective as it could be, and the process should change to improve it.

The third group of questions asks general education teachers their thoughts on a general education teacher administered screening test for dyslexia. These questions are the most important for this study. These questions would show if this proposed solution for unidentified dyslexia in the school system would be effective or not. If general education teachers believed this type of screening test could be beneficial in identifying undiagnosed dyslexic students, that information should be taken seriously and should inspire further research and development on this topic. Again, the value of general education teachers is that they spend so much time with their groups of students and can see firsthand what signs and risk factors are prevalent in the classroom.

The goal of the study was to try to research one possible solution to the problems in the dyslexia identification process. It is not to say that is process is completely ineffective, but since there is still a significant portion of students with dyslexia who are late-diagnosed or undiagnosed (Catts, Compton, Tomblin, & Bridges 2012) it is clear that more can be done to improve the process. Students, despite any disorder or disability they may have, should be able to go to school and have the accommodations and support they need to succeed. This study was designed to look at a way to make this even more possible by including general education teachers in the process.

Conclusion

While this study could not be executed due to COVID-19, this study overview still has significance for the dyslexia identification topic. This study could easily be replicated by

researchers with greater resources and expertise in this field. This study overview could even inspire others to create their own survey or study. The direction that schools and intervention programs will take in the future is unknown, but this study has hopefully inspired the inclusion of general education teachers into conversations on the dyslexia identification process, and possibly inspired research into novel processes for identifying undiagnosed dyslexic students to help them succeed.

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Appendix

Figure 1: Human Subject Research Training Program Certificate



Completed Application for Approval of Research Involving Human Subjects:

https://drive.google.com/file/d/1j_LQuFQVX5SU5bAuI8C85eL5nVFXZFb2/view?usp=sharing

Completed Informed Consent Letter:

<https://drive.google.com/file/d/1orqj03s2BrVkUSaxyrhkhMVYUkAWUc7X/view?usp=sharing>

Completed Recruitment Letter for Email:

<https://drive.google.com/file/d/1oZT-4rei-KdSWKN4yzzB1USZlxeQV3E4/view?usp=sharing>

Completed Survey Questions Downloaded from Qualtrics:

<https://drive.google.com/file/d/1eMo4tCtcIcl6MQLbwkvXmGma5F8DzceK/view?usp=sharing>

Reminder Email Draft:

<https://drive.google.com/file/d/1d66APE7ZU6yZQ555bwXZbk7-k8L20oEF/view?usp=sharing>