

Undergraduate Thesis Prospectus

Proactive Diagnosis of “At Risk” Students

(technical research project in Computer Science)

Effective Practices in Special Education Advocacy

(sociotechnical research project)

by

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On my honor as a University student, I have neither given nor received unauthorized aid on this assignment as defined by the Honor Guidelines for Thesis-Related Assignments.

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General Research Problem

How can we increase the rate at which students with special learning needs achieve mandatory accommodation?

The Individuals with Disabilities Education Act is a federal law that guarantees a free appropriate public education to eligible children with disabilities (“About IDEA”, 2020). However, Yngve (2019) reported in a cross-sectional study that over 50% of students who have been identified as needing accommodations do not receive proper support in the majority of school settings. Research conducted by Emmers (2017) and Weyandt (2008) shows that a lack of proper attention in a school setting results in students with special learning needs more likely to experience academic underachievement, low grade point average, high drop-out rate, and difficulties with social interaction.

There are huge disparities among states in the percentage of students who receive special education services, ranging from 6% to 15% (Camera, 2019). IDEA (2020) specifies that it is the responsibility of the state to establish policy that insures “free appropriate” education to all students; however, each state has their own funding mechanism to allocate special education funding to districts. A model such as this is not conducive to a fair and just education for all American’s with special learning needs, as students in states with more fair funding policies are more likely to achieve accommodations (Parker, 2019). In turn, the neglected students are further marginalized and, as each year goes by, fall further into the cracks of our system. No government official, school administration, teacher, or even parent should have total diagnostic and prescriptive power over the education of a child. We need to figure out a fair and standardized process for IDEA’s implementation if we wish to achieve equal opportunity for our youth.

Proactive Diagnosis of “At Risk” Students

How can we perform diagnostic analysis on a group of subjects to determine which members are “at risk”?

I am planning on completing research in the Computer Science Department in place of my Technical Project. I have been in contact with Professor Tian and Professor Basit, and I have been told that I will be able to get a better idea of the projects I am able to work on when enrollment opens.

Identification is one of the greatest barriers to ensuring fair and just accommodations for students who need them. It is oftentimes the case that individuals with more mild levels of disability are overlooked by their administrations: according to the school, their needs were not serious enough to be addressed. Schechter (2018) surveyed a group of who were determined to be eligible for accommodations at their university; however, fewer than 20% had been accurately diagnosed and accommodated in earlier schooling experiences. Woods (2018) observes in her studies that, if not placed in special education until partway through schooling, students have much more difficulty with remediation of learning practices. Woods also notes that these “delayed identification” cases occur most frequently among urban students with less-educated parents.

Identification at an early age is of utmost importance in order to properly serve students with special learning needs: I hope to determine how data and analysis can be used to help identify “at risk” students as “outliers” that should be further assessed in some context. One unusual constraint is that it could be difficult to obtain sufficient training data and relevant metrics tracking performance of young students, which when such students should be identified.

Observation sessions, assessments, and professional consultation with parents are the main forms of identification processes carried out in schools (Riddle, 2017). There are also some tools to gather information regarding needs a student may have, such as the “Asset-based Context Matrix” (Wilson, 2004). However, no such systems have been implemented on any large scale in United States public schools. In addition, no standardized systems are in place to track a students’ progress over time and provide some context to the trajectory of that student. If such a system was implemented on a national level, it would give the federal government a means to properly monitor and better enforce the execution of IDEA.

I want to create a computing system that can track metrics related to the current-state and progress of students on a large scale. Through the use of training data and sufficient, standardized testing for students, there should be no child unaccounted for. I hope to be able to deploy a system that can take various forms of data regarding student performance and be able to provide information that can help identify or target learning needs not just through assessments of that student, but through all the other students in our system. At the end, I hope to be able to create a tool that is able to keep track of every student in some system and draw attention any “at risk” student in a timely manner.

Effective Special Education Advocacy in the United States

Since 2000, how have the advocates of children with special learning needs achieved mandatory accommodations for them in U.S. public schools?

IDEA requires parental participation for evaluation consent and construction of a child’s individualized education program (DoE, 2020). However, systemic barriers expose inequities in this process for marginalized members of our society. Members of marginalized groups

frequently lack the necessary knowledge and education, or even time, to properly advocate for their child (Burke, 2018). Special education advocates assist parents and children in obtaining special education services; nevertheless, over 40 percent of parents were not fully satisfied with their child's accommodations (Goldman, 2020).

State governments implement IDEA, providing free appropriate public education to eligible children (DoE, 2020). They seek public trust and support and allocate special education funding to districts (Parker, 2019). School districts administer the programs within budget constraints (Burke, 2018). Such a circumstance came to light when, in 2014, Texas Public Schools limited special education services to 8.5 percent of students, thereby denying thousands of students accommodations (Kamenetz, 2018). Parents typically strive to provide their children with the best academic opportunities (Siddiqua, 2017), but many parents of underserved groups are disadvantaged in this effort. Some advocacies work for the interests of individual children who need special education services and their families (Uusitalo-Malmivaara, 2012). Some also act as agents of change on a larger scale, working to address and fix inequities they see in the special education system as a whole.

According to the Arc of the U.S. (MediSked & Arc, 2018), successful individual advocacies build relationships with the families they serve before any other actions are taken. Burke (2017) studied 33 graduates who completed the Volunteer Advocacy Project (VAP) training: all 33 agreed that their successes required personal connections with the family. According to Colombo (2019), advocates must establish relationships to access parents' lived experiences and discover useful patterns.

They must study students' histories and explain their rights to their parents. Kerry-Henkel & Eklund (2015), however, observe that the required documentation for a special education case,

which may exceed 50 pages, can interfere with such parental involvement. They recommend simpler writing, graphic organizers, explanations of jargon, and other guidance for helping parents better understand these documents. Educated parents better understand their child's situation and make more effective advocates.

According to Burke (2017), effective advocates are disability experts and strategic planners; Trainor (2008) concurs, adding that they are also intuitive thinkers and agents of change. It is important to understand what services you, as an advocate, can provide and to be transparent. An advocate must be prepared to recommend legal representation if necessary (Gehring, 2020).

According to Zaretsky (2005) and Goldman (2020), effective advocates accompany parents to meetings with school administrators. Their presence allows advocates to relieve parents' stress and improve their satisfaction with the results and with the school, as well as help the administrators better understand and empathize with the student and the parents.

Through the research I have studied thus far, the above tactics have proven themselves to be elements of great advocacy.

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