

Pre-Service Teachers Assisting the Transition of the Student with Autism from School to Adulthood

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Abstract

Pre-service teachers, both Early Childhood Education majors and Secondary Education majors, were challenged through an assignment to plan and develop kits for learners with Autism Spectrum Disorder (ASD) to use in preparation for transitioning from school-age to work or independent or group home living. This Project-Based Learning (PBL) experience added relevance to the assignment and assisted pre-service teachers in understanding of the need for transitions. The goal of the study was to assess the pre-service teachers' learning and understanding of the need for transitions for the students with exceptionalities by connecting learning to action with a PBL assignment. Since the assignment was authentic and would be used by students with ASD, pre-service teachers found more relevance and meaning to their learning than they may have with a traditional assignment. Also, by participating in this project, pre-service teachers deepened their understanding of the student with ASD and became more confident in their own abilities to teach students with ASD. The practicing teachers, who are preparing students with ASD to transition from school to work or independent living, perceived the transition projects as desirable tools for teaching transition skills.

Key Words

Autism Spectrum Disorder, Project-Based Learning, Authentic Assignment, Transitions, Pre-service Teacher Training

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Background

It is well documented that when schools meaningfully connect learning to an authentic experience, the students' academic achievement improves. Problem-Based Learning (PBL) is a dynamic classroom approach in which students actively explore real-world problems and challenges and acquire a deeper knowledge (Edutopia, 2016). In its most developed forms, it includes a clear focus on learning through civic engagement and participation in service projects of obvious relevance to the local school or community (Clark, 2008). Civic engagement promotes civic knowledge, responsibility, and participation in actions in support of the stewardship of community needs, and the resolution of issues of public concern.

As students in PBL become actively engaged in studying and responsibly addressing relevant local issues, the results have included higher levels of learner engagement, and a renewed sense of value for the spirit of stewardship of the community. This is a values-driven approach,

designed to advance educational goals by connecting learning to action, while also providing for a need in the community. . Generally, research on PBL has found that students who engage in this approach benefit from gains in factual learning that are equivalent or superior to those of students who engage in traditional forms of instruction (Thomas, 2000).

In PBL, similar to project-based learning, students learn through the process of solving a problem. PBL asks students to exhibit not only mastery of content, but also the ability to use content knowledge for problem-solving, analysis, communication with others, ethical reasoning, or other learning outcomes and to apply content knowledge in a “real-world” situation. Students integrate their content knowledge in order to analyze a new situation, problem, or event, and then apply their knowledge in order to address “real-world” issues or problems. Students and communities gain when the projects which are identified address real community needs.

PBL curricula often emphasize learning how to listen to other points of view, critical thinking skills, consensus building, and group goal setting and problem-solving (Clark, 2008). Project-based approaches include strong civic engagement opportunities and build concrete citizenship skills, such as the capacity to analyze and communicate information for creative problem-solving and the ability to create and facilitate effective dialogues (Clark, 2008). Clark (2008) further emphasizes that understanding the significance of what they are learning and doing, inspires students to work harder in their classes, and for their community.

These project-based assignments yield artifacts that demonstrate student achievement levels. Recognizing that learning can be demonstrated visually, graphically, orally, digitally, and through performance, project-based assignments do not focus exclusively on text-based evidence to demonstrate levels of learning. To help ensure that the assignment is both effective and meaningful, one must consider the importance of linkage between the assignment and the project. Learning experiences and associated assignments must allow students to demonstrate their understanding.

Through the use of a PBL assignment, pre-service teachers gained a deeper understanding of the need for transitions for students with exceptionalities. Through the assignment, the pre-service teachers also demonstrated their knowledge of the challenges that are faced by students and adults who have exceptionalities.

Need for the Project

Autism spectrum disorder (ASD) is a group of developmental disabilities that can cause significant social, communication and behavioral challenges. The learning, thinking, and problem-solving capabilities of people with ASD can range from gifted to severely challenged. Some people with ASD need a great deal of help in their daily lives; others need less. This is one of the reasons that autism is considered a spectrum.

People with ASD often have complications with social, emotional, and communication skills. Many people with ASD also have different ways of learning, paying attention, or reacting to things. Signs of ASD begin during early childhood and normally last throughout a person’s life. Some examples include avoiding eye contact, having trouble understanding the feelings of

others, repeating phrases or actions, and having problems adapting to something new or a change in routine.

There are many challenges for a young adult identified with ASD when the young adult leaves the school system. Whether an individual is seeking financial support, personal fulfillment, social opportunities, or some combination of these, adult life may be filled with obstacles.

According to the Federal special education law, Individuals with Disabilities Education Act (IDEA), requires that school districts help students with disabilities make the transition from school to work and to life as an adult. Although IDEA mandates services and programs while the young adult is in school, there are no federally mandated programs or services for individuals once they leave the school system (Individuals with Disabilities Education Act, 2004). National data indicates that the majority of adults with autism are unemployed or underemployed (Butterworth, 2012).

When leaving the autistic support school (typically at age 21) to transition to adulthood, young adults who are identified as having Autism Spectrum Disorder (ASD) are challenged by forfeiting the familiar school routines and activities and the required support of the school system. Public schools are charged with the task of finding children with disabilities and providing services. But in the adult world, the responsibility to self-advocate, to apply for services and ask for what is needed, lies with the individual.

Researchers suggest that young adults with autism spectrum disorders have worse employment outcomes in the first few years after high school than do peers who have other types of disabilities. Also, just over half (53.4 percent) of the young adults on the autism spectrum who were surveyed had ever worked for pay outside the home within the first eight years after leaving high school (Roux et al., 2013).

Other researchers find that adults on the autism spectrum were less likely to have ever lived independently since leaving high school, compared to their peers with other disabilities. More young adults with autism lived with their parents or guardians, and for longer periods of time, than did individuals with emotional disturbance, learning disability or intellectual disability. They also had the highest rates of living in a supervised living arrangement (Anderson, Shattuck, Cooper, Roux, & Wagner, 2014). Similarly, Duncan (2013) found that only half of the diploma-bound students with ASD with average and above intelligence had deficits in daily living skills. The majority of persons with ASD continue to depend on their families for support into their adult years (Billstedt, Gillberg, & Gillberg, 2011).

There is growing evidence that the formal transition process, which public schools are supposed to facilitate as mandated by IDEA, is not working well for students with disabilities. For example, one group of researchers (Hetherington et al., 2010) conducted in-depth interviews with a small number of transitioning teens, as well as focus groups with their parents, and found families to be extremely dissatisfied with the reality of the process. The students, who are supposed to be at the center of transition planning, played a minimal role, if any, while parents felt communication with the school was inadequate; that faulty assumptions were made about their children; and that there was a tendency to funnel them into traditional adult service

programs whether these were appropriate or not. The researchers concluded that adolescents' and their parents' perceptions of the transition planning process did not consist of best practices and mandates (Hetherington et al., 2010).

The Project

The “Transitioning the Student with Autism from School to Adulthood” project proposed the two goals of (a) proposing school to work transitional experiences for exceptional learners, and (b) providing experiences for pre-service teachers to develop curriculum for exceptional learners. Pre-service teachers, both Early Childhood Education majors and Secondary Education majors, were challenged to plan and develop kits for the learners with Autism Spectrum Disorder (ASD) to use in preparation for transitioning from school-age to work or independent or group home living. The kits included functional life skills, such as the following:

- Money activities, for example banking, writing checks, balancing checkbooks, and the like
- Flash cards for money and time
- Time and elapsed time activities
- Self-Advocacy activities
- Health and hygiene information and practice activities
- Functional reading, such as bus schedules, ads and coupons, reading medication bottles, menus, and the like
- Emotion intelligence activities
- Social interaction activities
- Sequencing and cause and effect activities
- Use of maps activities

The assignment is given as part of a course for undergraduate students (pre-service teachers) who are learning about students with disabilities in the classroom. This PBL assignment allows pre-service teachers to apply their knowledge gained through coursework, regarding ASD and task analysis, to create a kit which can be used by persons with ASD to practice skills of independent living or work skills. Kits should have included a rationale, step-by-step instructions for the task, a video (if applicable), practice opportunities, and all the resources necessary to practice. For example, a kit that teaches a student with ASD how to pack a lunch box for work would include a rationale, step-by-step instructions, and items that may be used for practicing, like a lunch box and plastic food, utensils, sandwich bags, and the like.

These kits were peer-reviewed to allow students to gain further understanding and make necessary changes. The final review or assessment by the professor was through a given rubric. Once corrections were made, the completed kits were donated to a classroom with learners with ASD who are transitioning from school to work or independent living.

Research Questions

The research questions follow:

Research Question One: By participating in a PBL assignment using an authentic project, one that will be used by students with ASD, do students find more relevance and meaning to their learning than they may have with a traditional assignment?

Research Question Two: By participating in an authentic project, one that will be used by students with ASD, will students increase their understanding of the need for transition training for students with ASD?

Research Question Three: By participating in this PBL project, will students deepen their understanding of the student with Autism Spectrum Disorder?

Research Question Four: How does the practicing teacher, who is preparing students with ASD to transition from school to work or independent living, perceive the transition projects?

Methodology

Qualitative information was gathered to evaluate the success of the project. Focus groups were held to collect responses from pre-service teachers participating in the project. Responses regarded perceptions about finding more relevance and meaning to learning by participating in a PBL assignment. The assignment was authentic in nature due to the fact that the kits were donated to a school. Due to the authenticity of the assignment, multiple questions in the focus group sought to learn whether pre-service teachers thought the assignment was more valuable to their learning than typical reading/writing assignments. Other focus questions explored the pre-service teachers' understanding of the need for transition training for students with ASD. Further, the questions and discussions helped to discover if the pre-service teachers deepened their understanding of ASD by considering the stereotypical differences of the student with ASD when planning the project.

Qualitative information was gathered from school personnel from autistic support schools, who received the completed kits for use with their students. After reviewing the kits, the school personnel answered questions prompting open-ended responses regarding the impact that the transition kits may have on their students.

Participants

Pre-service teachers (Early Childhood and Secondary Education majors) who were enrolled in the course, Exceptional Learners in the Classroom II, were assigned the project-based assignment as part of their coursework. The course focuses on low-incidence disabilities, or those disabilities that are not often found in regular education classrooms. These junior year students were enrolled in the course the summer of 2015 and fall of 2015. There were twenty-two pre-service teachers participating. The participants were invited to share thoughts and comments through small focus groups regarding perceptions and learning.

Two teachers from two separate ASD support schools with students who are transitioning from school to work (ages 14 through 21) were invited to participate in the study. The participating teachers were suggested by the director of the National Human Services Schools (NHS), and then recruited by the researcher. The teachers received the transition kits that were generated by

the pre-service teachers and were asked to review the kits and then participate in a questionnaire regarding the impact the kits may have on their students.

Findings

By participating in an authentic project, one that will be used by students with ASD, pre-service teachers were able to find more relevance and meaning to their learning than they may have with a traditional assignment. Every participating pre-service teacher responded positively to the question, “Did knowing that the transition kits would be donated to a school when they were complete influence your own learning?” Comments indicated that pre-service teachers found “value to our work, knowing that the kits would actually be used and not just something that was corrected and returned to us.” One noted, “This is going to be used by someone. It will be helpful to someone, allowing that person to learn something that they could not do before.” Another stated that the assignment invoked both excitement and fear. It was exciting to apply the knowledge that we accrued in classes, but it was scary because it was real, which meant it had to be done well.

A list of ideas for the transitions kits was generated by teachers from two participating schools for autistic support. Pre-service teachers selected an idea from the list or explored their own idea with approval from the researcher/professor.

One girl designed a project on how to fill out a job application. She expressed her excitement because her project, “may get someone a job someday.” Another concurred, “I hate busy work, and this is not busy work by any means. This is going to help someone succeed.”

By participating in an authentic project, one that will be used by students with ASD, pre-service teachers increased their understanding of the need for transition training for students with ASD. Students admitted to not realizing that when persons with ASD leave schooling, they may be on their own. One confessed that he or she never thought about someone with ASD being independent. Admitting that it was stereotypical, the student acknowledged that he/she thought that there would always be someone there to help an individual with ASD. The student disclosed, “Knowing that I am going to be on my own very soon is scary to me. I can’t imagine how someone with ASD must feel.” Another pre-service teacher discussed the importance of realizing why it was important to learn certain skills, so the rationale for doing the project became important, for example learning to iron a shirt is an important skill to prepare for an interview because the first impression of the candidate at the interview is the personal appearance.

In some cases, the project changed the pre-service teachers’ views on what persons with ASD *can* do. One student remarked, “I never realized what people with ASD need to do. Why would someone with ASD need to tie a tie? It’s not like he would have a job, which was a terrible thing for me to say. My whole thought process has change 180 degrees. I now think that they can do a lot in society.” Another student stated that the project brought into perspective the idea that persons with ASD need to learn how to do things for themselves. By doing the project, “We learned that they are capable, and we can show them things that we do every day to make it easier.”

By participating in this project, students deepened their understanding of the individual with Autism Spectrum Disorder. Several pre-student teachers remarked that by participating in this project, they realized the abilities of the persons with ASD rather than the disabilities. When planning for the project, one student realized, “They do have the ability to do this. It is just that we have to show them.” One student shared, “Before doing this project, I never really had any experience with someone with ASD. I have seen students who have been diagnosed in the field, but I have never really had too much interaction with them. After this project, my confidence of how to reach these individuals has changed. I feel increasingly more comfortable and confident to be able to teach them.” A secondary education student recognized, “I can do this, and I should do this because I may be working with students of any level. Wanting to be a high school teacher someday, I need to help my own students think beyond high school. I can do things like transition kits to help my students be prepared.”

Some of the most noteworthy observations when planning the projects were identifying a topic, the need for detail and breaking skills into very small tasks, and the narrowing of a topic of a basic skill into an even smaller task, if needed. For example, one student project was how to do laundry. The student noted that she does laundry all the time, so she thought her project would be easy to explain. As she developed the assignment, she learned there were so many subtasks to the task of doing laundry, such as sorting, choosing the correct detergents and other products, choosing the settings on the washer and dryer, using the dryer, folding, and putting away the clean items. The same student added that she also included things like, “the washer may be loud, and that is okay,” as she planned for the hypersensitivity of persons with ASD. Another student’s project was how to fill out a job application. In her planning, she included going to a business and picking up an application. She noted, “I put you just have to ask for the application, and then I realized they don’t always know how to communicate with other people with whom they are not familiar, so I included a script to practice asking for an application. That was important for mine.” Another student finished his kit on how to iron a shirt and then realized he neglected to inform the user NOT to touch the iron.

Using literal language when developing the kits was also important. One student, who planned a transition kit for how to order food at a fast food restaurant, included a statement about not “cutting in line.” She changed the wording so it would not be misconceived as using scissors when standing in line. Another student planned a kit on how to read a bus schedule. In her product, one statement said that she had “to blow the schedule up.” It was reworded so that it did not sound like the schedule was exploding.

Pre-service teachers included many different methods when developing the transition kits. The following were found to be useful in designing the kits: rationales, task analysis (detailed step-by-step instructions), samples, games, podcasts, scenarios, visuals, practice activities, scripts, answer keys, and social stories. Several comments indicated that their own learning increased in the areas of differentiating instruction, giving clear instructions, and exploring what the needs of the individual are. One secondary pre-service teacher noted that he is currently pre-student teaching in a pre-calculus class. He indicated that he knows his content so well that it is hard to realize that his students don’t know something. He recalled a lesson on factoring, when he became frustrated when his students could not grasp the concept. Because of the detail needed in

this transition project, he stated that it taught him how to break tasks down even more, seeing that he could have disaggregated the factoring concept further.

In addition, pre-service teachers see other uses for the transition kits. They indicated that the kits would be appropriate at many different age levels and for many individuals with other types of disabilities, for example cognitive disorders, developmental delays, and traumatic brain injury, where the individual may need to re-learn a skill. It was also mentioned that the kits may be useful for an individual from a different culture or an English Language Learner (ELL). Students even admitted that they learned from their own projects, like how to tie a tie and the proper ways to do laundry and load a dishwasher.

In addition to the pre-service teacher, the practicing teachers, who are preparing students with ASD to transition from school to work or independent living, also perceive the transition projects as valuable. The kits were donated to two schools for autism support. Comments from the practicing teachers confirmed that the transition kits are useful for teaching their students to transition from school to adulthood. One teacher noted that many students are not able to drive, so the How to Take the Bus kit is useful for teaching the students how to read a bus schedule and the behavioral expectations for riding public transportation. The Reading an Analog Clock kit not only teaches how to tell time, but also gives practice for common times during the day, like mealtimes and leaving for work. Similarly, the How to Balance a Checkbook kit assists students in learning to balance a checkbook register, which will hopefully prevent a student from overdrafting an account.

One kit, which teachers identified as helping students to develop interests, is Using an Index. The kit gives practice activities for items like recipe books. How to Tie a Tie and Filling Out a Job Application were two kits acknowledged for post-secondary or career planning. The Filling Out a Job Application kit also assists students in how to disclose information about their disabilities, if needed.

Teachers accredited several kits as helpful in developing skills related to independent living: Setting a Table, Doing Laundry, Ironing, and Loading a Dishwasher. Other kits help students learn about health and welfare, like Brushing Teeth and Shaving. The Dressing for the Weather kit teaches students about the hidden curriculum for what they should wear when the weather is cold or hot. Teachers noted that the students were enjoying using the kits to practice daily life skills.

Conclusions

The “Transitioning the Student with Autism from School to Work” project successfully fulfilled the goals of transitional experiences for exceptional learners, and provided experiences for pre-service teachers to develop curriculum for exceptional learners. By participating in a PBL assignment, the pre-service teachers gained more understanding of the student with ASD and the need for transition training for students with exceptionalities.

Further, pre-service teachers found more relevance and meaning to their learning than they may have with a traditional assignment and increased their understanding of the need for transition

training for students with ASD. Also, by participating in this project, pre-service teachers deepened their understanding of the student with ASD and became more confident in their own abilities to teach students with ASD.

The practicing teachers, who are preparing students with ASD to transition from school to work or independent living, perceived the transition projects as desirable tools for teaching transition skills.

Further studies may wish to explore the use of the transition kits with persons who have other types of disabilities, such as emotional or behavioral disorders, cognitive disabilities, or traumatic brain injuries. In addition, research, regarding the use of the transition kits in group homes for adults with disabilities, may shed more light on the assessment of the kits for persons with disabilities. The participant group of this study was relatively small. The study would need to be done on a larger scale to be conclusive in its findings.

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