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# Using Transformative Learning Theory to Enhance Professional Development

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### ABSTRACT

**Purpose:** Pediatric occupational therapy and physical therapy interventions for children with disabilities are designed to increase function and often focus on developmental skills instead of on the environmental context and promoting self-determination skills. A professional development course was developed to help therapists develop intervention strategies to meet developmental outcomes, while also promoting children's self-determination and creating opportunities for children to authentically participating in daily routines, including leisure and community play. Transformative learning theory was used as a basis to develop this course. The purpose of this article is to report on course activities and the assessment of participants' "transformation" at the completion of the course. **Method:** A pre-test/post-test design was used to determine whether participants in this course (n=3) had made transformations in their habits of mind when designing client goals, intervention plans and recommendations for a fictional case study of a child with a disability. **Results:** Participants wrote pre-test goals that focused on building skill in typical developmental sequences; whereas post-test goals focused on using strengths the child had and changing the environment to encourage authentic participation of the child. In addition post-test goals and interventions focused on determining the child's preference and choice about activities to participate in. Pre-test referrals were for equipment and other programs to address skill development; while post-test referrals focused on play and recreation opportunities. **Conclusion:** Following completion of a course using transformative learning strategies, participants demonstrated changes in habits of mind upon completion of a post-test case study in which goals, interventions, and referrals were more consistent with themes of the course including self-determination and authentic participation.

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### INTRODUCTION

Health professionals attend continuing education courses for a variety of reasons, such as to learn new skills and to meet licensure requirements. This article describes a professional development course for occupational therapists (OTs) and physical therapists (PTs) that was designed to help change the way therapists approached therapy and thoughts about treatment outcomes. More specifically, we challenged therapists' assumptions and beliefs about practice to expand their knowledge and open their minds to other perspectives by using transformative learning theory to guide course development. The primary objective of the course was to provide a platform for therapists to consider the impact of traditional, developmentally focused therapy compared to therapy that is focused on integration into family life and community life. Transformative learning theory is particularly suited for courses such as this one that are designed to challenge existing view points and promote reflection on current practices.

Pediatric OTs and PTs focus on providing therapy services that increase the functional participation of children with developmental delays and disabilities. However, many OTs and PTs who provide service to children continue to practice within a

developmental or “reductionistic” frame of reference which views disability as a problem to be “fixed” within the individual child.<sup>1-3</sup> This is in contrast to the view that the problem lies within the environment, not the child, and that altering the context may lead to more functional and meaningful outcomes for children. While intervention focused on reaching developmental milestones may be appropriate for some children with delays, milestone-based intervention alone may not be appropriate for children whose disabilities are permanent and will persist throughout the course of their lives. Children with complex disabilities require intervention that addresses both present day concerns (e.g. obtaining durable medical equipment, obtaining assistive devices, supporting parents to facilitate the child’s play and independence in age-appropriate self-care), as well as those concerns that are anticipated as they grow, mature, and transition through different stages of their lives. Occupational therapists and physical therapists who work with young children and their families in their homes and communities have the unique opportunity to help children realize important outcomes related to later life, such as community integration, role attainment, and the development leisure and vocational interests, in ways that other health professionals who do not have regular and frequent contact with children and their families cannot.

Interventions that are both responsive to the child’s needs and or focused on anticipating long-term needs may ensure that children with significant disabilities do not develop learned helplessness. Learned helplessness, or the belief that one is unable to exercise control over the environment or related circumstances, can be a significant barrier to positive long-term outcomes for many children with disabilities.<sup>4</sup> Occupational therapists and physical therapists can design intervention plans and create opportunities for children to develop self-determination skills by providing opportunities for children to exercise control, while at the same time promote development and reduce the effects of impairments. Self-determination has been defined as a set of skills that children learn by explicit and implicit instruction and includes the ability to make decisions, solve problems, set goals and develop action plans, engage in self evaluation, and advocate for an individual’s own rights and needs.<sup>5</sup> Toddlers and young children can develop self-determination through regular opportunities to develop preferences, make choices, demonstrate independence, and take initiative to produce effects in their environment.<sup>6</sup> Self-determination skills help children to learn how to think for themselves and develop a sense of self-efficacy and competence.<sup>7</sup>

Occupational therapists and physical therapists want to foster self-determination skills in children with significant disabilities and support their participation at home and in their communities, but reframing the purpose of therapy from helping children to “catch up” to helping children live satisfying lives, is challenging. The co-authors, pediatric occupational therapy and physical therapy faculty members at a public urban university in the Midwest, developed and co-taught a continuing education course designed to support pediatric OTs and PTs in making the shift from providing traditional, developmental therapy to participation in focused, community-oriented therapy. In addition, a primary objective of the course was to encourage therapists to create opportunities for children to develop self-determination skills in therapy and to document that this was taking place through goal setting and goal assessment. The andragogical (adult learning) foundation of the course was transformative learning theory.<sup>8</sup> The course instructors used transformative learning theory to guide their creation of an educational climate that allowed therapists to deconstruct commonly held views about disability and therapeutic interventions that are reimbursable or typically covered by insurance companies, and reconstruct views that emphasized children’s rights, self-determination, authentic life participation, and the role of occupational therapy and physical therapy in helping children achieve these aims. Through carefully designed activities and experiences, the co-instructors challenged the therapists to reflect on current and accepted practice, the expectations and values they held related to the participation of young children as well as children with disabilities in the community, and disability rights. Language from the World Health Organization’s International Classification of Functioning, Disability and Health (ICF) was used throughout the course to distinguish between different needs, as well as levels of intervention. The purpose of this article is to report on course activities and the assessment of participants’ “transformation” at the completion of the course.<sup>9</sup>

## **COURSE DEVELOPMENT**

The course was supported by funds received through an interdisciplinary summer seminar competition sponsored by the Graduate College at University of Illinois at Chicago. The course was offered to OTs and PTs through the university’s Office of Continuing Education and to students who returned to school to complete a degree beyond their entry-level requirements.

The course met eight times over the duration of the summer term. Each class session lasted six hours. This block of time allowed instructors to design in-depth experiences that included community experiences and problem-based learning opportunities.<sup>10</sup> Occupational therapy, physical therapy, early intervention, and school systems literature were reviewed to select course topics. In addition, a group of local expert therapists provided input regarding topics they believed were essential to include in a course that was focused on increasing community participation for children with disabilities who receive therapy services. Table 1 provides a brief description of the seven major class topics and their corresponding objectives. During the

eighth and final class session participants presented final projects and shared how they would incorporate the knowledge and skills they learned through the course into their practices.

**Table 1. Description of Class Topics and Corresponding Objectives**

Topics	Objectives
Factors that Influence Service Provision	<ul style="list-style-type: none"> <li>• identify &amp; discuss factors that influence service provision</li> <li>• compare &amp; contrast traditional service provision &amp; proposed models for provision of services across participation continuum</li> <li>• assess the impact of legislation and funding on service provision methods</li> </ul>
Leisure Participation for Children	<ul style="list-style-type: none"> <li>• identify factors of legislation that provides for inclusive leisure participation</li> <li>• create necessary supports &amp; community resources for leisure inclusion</li> <li>• illustrate ways to promote self-determination skills during leisure participation</li> </ul>
Health & Wellness of the Child/Family	<ul style="list-style-type: none"> <li>• identify factors that influence health &amp; wellness of the child and the family</li> <li>• define and choose appropriate resources for families</li> <li>• reframe family service plans to include the child as another key decision maker</li> </ul>
Universal Design & Technology for Play	<ul style="list-style-type: none"> <li>• identify features of Universal Design for Learning (UDL)</li> <li>• hypothesize individual and contextual factors that may be restricting play</li> <li>• use UDL principles to design an object, environment, or experience</li> </ul>
Access to Community Play	<ul style="list-style-type: none"> <li>• compare child-environment fit in community play environments</li> <li>• make necessary adjustments to community play environments</li> <li>• incorporate teaching self-determination skills in community participation intervention plans</li> </ul>
Contemporary Family Coaching Models	<ul style="list-style-type: none"> <li>• define the coaching process &amp; discuss when to use it in therapy</li> <li>• develop coaching strategies for parents to promote their children's self-determination</li> <li>• compare and contrast the pros &amp; cons of coaching models</li> </ul>
Future Visions & Person-centered Planning	<ul style="list-style-type: none"> <li>• defend family's outcomes for their children with disabilities</li> <li>• devise strategies to include young children in future planning</li> <li>• compare &amp; contrast person-centered planning tools</li> </ul>

During the initial planning phases of the course, the two co-instructors considered the use of traditional didactic instructional methods and determined that they were not appropriate for a various reasons. For example, lecture-based courses are often structured so that the instructor is situated in a position of power and viewed as the expert, while students are subordinate and viewed as novices. In addition, traditional lecture-based courses, which emphasis content dissemination, typically cannot accommodate rich class discussions or deep reflection. After identifying the limitations of traditional didactic instructional methods, the co-instructors reviewed the adult learning literature in search of a theory that could be used to frame the course and matched with the course topics and objectives.

Adult learners are self-directed, motivated by their own interests and values, and bring valuable knowledge and experiences to the classroom.<sup>11</sup> When providing training or educational experiences to adults, conventional instructional methods that require attendees to passively participate and only include didactic instruction are not as effective as interactive methods that encourage attendees to problem solve and actively guide their own learning.<sup>12</sup> The course objectives, which emphasized reflection on current practice and expectations of children with lifelong disabilities, and the profile of the adult learner, required the co-instructors to select interactive instructional methods, which are a key feature associated with transformative learning theory.<sup>13</sup> To this end, the instructors sought to expand students existing perspectives, introduce them to new perspectives, support them in developing new ways to frame their own thinking, and critically reflect on their attitudes, beliefs, and judgments. The instructors

used these methods because they intended each of the participants to be actively engaged during the entire length of each of the sessions. Included in the course design were experiential learning and opportunities to solve unfamiliar problems, examine beliefs and assumptions, experiment with new roles, and outline plans for action.<sup>8</sup> In addition, other opportunities such as debates, case studies, discussions about how theory relates to practice, reviews of autobiographical accounts, field trips, immersive experiences, and the critical examination of commonly held view points were also included.<sup>13-15</sup>

In addition to the instructional methods described above, in-depth group dialogue, or *discourse*, was another key feature of this course. Each course began with a short didactic component to highlight key concepts from the assigned reading. Then, instructors facilitated discussions by asking students critical questions that encouraged them to thoughtfully examine evidentiary support for opposing opinions and become aware of their *habits of mind*, or guiding personal beliefs that influence their interpretation of experiences. The therapists were asked to think about the children and families they knew, share their stories, and practice framing their experiences with the new perspectives that were presented to them in class. Consciousness was further raised when guests from the community presented alternate view points about the rights of individuals, including children, with disabilities. Dialogue with guests further supported the therapists' reflection. Invited guests for this course included parents of children with developmental disabilities, individuals from community agencies, and other professionals who work with and on the behalf of children. Additional viewpoints were presented through videotaped therapy sessions that included narratives from caregivers and children, as well as literature based on autobiographical accounts of individuals who had at one time received therapy services in one form or another. All of these activities were presented to the therapists as means for them to explore their existing perceptions of the needs of children with disabilities and establish an environment for them to have a transforming experience.

### ASSESSING TRANSFORMATION

Transformative learning is said to take place when the learner has a chance to examine his or her own practice based on new experiences, and then revises his or her current views and integrates these new views into current practice.<sup>13,16</sup> The course instructors conducted a pilot study approved by the university's Internal Review Board to determine whether or not the curriculum design offered students a transformative experience.

Three OTs who worked in pediatric practice settings enrolled in the course. Two of the OTs had received their certification within the last year and the other OT had practiced for more than five years. All of the participants were currently enrolled in a clinical occupational therapy doctorate program (OTD). Each of therapists volunteered to participate in the pilot study.

The course instructors used a pre-test/post-test design to determine whether or not participants had changed their habits of mind and had a transformative experience. To implement the pre-test/post-test design, participants were given 45 minutes to read a fictional case study about Sam (patient, an imagined four year old child with a disability), develop client goals, intervention plans, and make recommendations for referrals on the first day of class. Participants were also asked to complete the same set of activities on the last day of class. Table 2 provides an abbreviated version of the case study. The pre-test and post-test were administered by a staff member and not by either of the instructors.

**Table 2. Abbreviated Case Scenario**

Sam is a 4 year old boy with a diagnosis of cerebral palsy, spastic quadriplegia. Sam is able to move around his house either walking holding on to furniture/walls or crawling to get from room to room. He has a manual wheelchair for outside and long distances. He requires minimum assistance for turns. He is able to sit on the floor or in a kitchen chair using at least one arm for support. Sam is able to feed himself finger foods and use a spoon and fork, but is very messy. Sam drinks by using a cup with an attached straw to prevent spillage. He is able to remove clothing without fasteners but Jill or another caregiver gets Sam dressed. Sam has awareness of when he needs to use the toilet but he will not communicate this to his family and will try to get to bathroom himself. He is mostly unsuccessful so Jill keeps a diaper on him. Sam requires maximum assistance for removing a soiled diaper and donning a new one. When he does make it to the toilet on time he can manage his clothing, but needs assistance for adequate hygiene. In terms of communication, Sam has about 50% intelligibility with strangers; 90% intelligibility with family and brother. Besides the wheelchair, Sam does not have any other equipment in the home.

Once all of the data were collected, they were transcribed and then analyzed using a general inductive analysis approach by the course instructors. The course instructors first grouped goals and referrals by related concepts and then looked at key themes present within each concept.

## **RESULTS**

Participants wrote a combined total of 9 goals for Sam (patient) during the pre-test and a combined total of 9 goals on the post-test. All of the goals the participants wrote on the pre-test and post-test were centered on three major themes: self-care, play, and functional mobility. Although all of the goals were focused on these three areas, the language used in the goal statements and the interventions selected to support goal achievement varied significantly between the pre-test and post-test. In addition to developing pre-test and post-test goals and interventions, participants also made recommendations for referrals. Referrals for additional therapies were common across pre-test and post-test recommendations.

Pre-test goal statements and interventions tended to focus on building skills in the areas of Sam's perceived areas of weakness. The participants emphasized moving Sam through typical developmental sequences and addressing limitations through compensatory and behavioral approaches.

### ***Self-care***

All three participants wrote a pre-test intervention goal to address Sam's tendency to have toileting accidents when he cannot get to the bathroom in time. Evidence from the case suggests that Sam has awareness of when he needs to use the toilet and that he can manage his clothing independently. However, each of the participants' toileting goals included graded amounts of adult assistance for the entire task or a mandate that Sam had to communicate his need to use the toilet to an adult. One participant's pre-test intervention focused on Sam's mom orchestrating a toileting schedule and using a positive reinforcement system to condition him to indicate his need to use the bathroom. Another participant's intervention focused on teaching Sam how to use a picture communication system to indicate his need to use the bathroom.

Post-test toileting goals and interventions capitalized on Sam's knowing when he had to use the toilet and were more related to Sam being able to identify when he needed assistance during the task, as well as directing the assistance he received. For example, one participant suggested that Sam should choose who he wants to have help in the bathroom and select which parts of the task he wants help with. Another participant rejected the idea of having an established toileting schedule because Sam had already developed awareness of when he needed to use the toilet and instead suggested that Sam's mom could better learn to read his nonverbal cues so that she could encourage him to get to the bathroom before he was at risk for having an accident.

### ***Play***

In addition to toileting, all of the participants also identified Sam as being in need of intervention to support play. Evidence from the case suggested that Sam was either not interested or did not know how to play with toys in the same way that his twin brother did. Pre-test goals and interventions were focused on teaching Sam "appropriate" play skills and further developing fine and gross motor skills to play more effectively. One participant suggested that Sam be offered only a limited number of activities or toys so that he could build specific skills. Another participant suggested that intervention focus on providing Sam with models so that he could better develop social skills.

Post-test goals and interventions were written to tap into Sam's preferences and expand his interests. All of the post-test goals included language related to Sam choosing or making choices about the activities he engaged in or the games he played. One participant even suggested that Sam should be able to identify at least two community activities that he wanted to participate in. Post-test interventions were focused on identifying and reducing barriers to Sam's play, exploring different methods for him to play, and exploring opportunities for him to play with peers inside and outside of the home. Rather than seeing Sam as having limited options or opportunities for play, the participants emphasis on exploration suggested a feeling that Sam's options were actually limitless and only constrained by adult creativity or ingenuity. As with toileting, post-interventions were matched to Sam's current ability level, built off of his strengths, and framed Sam's current difficulties during play as being a result of his context, rather than his abilities.

### ***Functional mobility***

Similar patterns were seen in the pre-test and post-test goals and interventions in which participants wrote related to Sam's functional mobility. Pre-test mobility goals and interventions were focused on increasing Sam's independent mobility at home. One participant wrote a pre-test goal related to independent community mobility. A common theme in all of the pre-test mobility goals was that the methods of mobility strategies were selected by the adults in Sam's life, either his mom or his therapists.

In their post-test goals and interventions, participants took into consideration the methods that Sam preferred to use for mobility (i.e. walking with a device, scooting, using a wheelchair). In addition, they considered mobility in the post-test phase as a means for Sam to explore contexts and access items, not as an end in itself. Participants also suggested that helping Sam to identify barriers to community mobility and participating in neighborhood activities was beneficial and a necessary precursor to teaching Sam compensatory strategies.

### **Referrals**

Common pre-test recommendations included linking Sam and his family to resources that focused on equipment or other programs to address skill development. All three participants made pre-test referral recommendations for equipment having to do with mobility or toileting. One participant recommended an additional referral for home modifications.

Common post-test recommendations were more focused on play and recreation opportunities. For example, participants specifically indicated that they would provide Sam's mom with resources about special recreation programs, accessible summer camps, and toy lending library. In addition, one participant recommended that Sam's family begin to explore personal assistants and respite services.

## **DISCUSSION**

Professional development workshops and courses are often designed to teach therapists new intervention techniques and skills. However, this course was focused on helping therapists change their expectations of young children with significant disabilities and discover ways they could promote self-determination and authentic life participation through therapy. Goals and referrals written by therapists during the post-test suggest that the instructional methods used in the course and based on transformative learning theory may have influenced the participants' habits of mind. While pre-test and post-test goals, interventions, and recommendations were all focused on self-care, play, and functional mobility, it appears that participants were less focused on addressing impairments and skill development during the post-test phase and more focused on addressing self-determination and participation. By providing Sam with opportunities to make choices and direct his assistance, the therapists were allowing him to exercise control over his environment and share in the decision making power. In addition, therapists wrote post-goals from a strengths-based perspective and appeared less concerned about "fixing" Sam compared to ensuring that he was getting the most out of life.

Post-test goals, interventions, and recommendations were written in a way that included Sam in the therapeutic process as a partner and not a patient. Participants carefully made plans that took into consideration the contextual variables that were tied to Sam's routines and how Sam could initiate and express self-determination. In addition, participants considered how they and other adults should respond to support further skill development when Sam demonstrated self-determination. Reflecting on personal and contextual variables, as well as consciously responding to children's attempts at exercising self-determination has been found to increase a child's sense of efficacy.<sup>6</sup> For example, therapists planned to help Sam explore different interests and leisure opportunities; they recommended varying the types of support provided to Sam and grading the level of assistance provided to him until there was a match between his skills and the task or environment. Participants presented these opportunities so that Sam's rights would be upheld and he would not be encouraged to play with or participate in something he did not like.

Despite the positive outcomes of the study, several limitations exist. First, Sam was not a real child and the therapists had the opportunity to develop goals, intervention plans, and referrals without the pressures of the contexts of the real world. It is possible that reimbursement constraints and other logistical factors would cause them to make different decisions if they were attempting to use their changed habits of mind in real, everyday practice. Second, the study design only included a single post-test measure. An additional post-test measure that was administered once the participants were back in their own work settings might have yielded valuable results. It is possible that therapists would revert back to their old habits of mind without the support and constant reflection offered by the group. Finally, there was a small sample size. Given the richness that each adult learner brings to the classroom, additional participants may have altered the climate of the classroom in meaningful ways.

In addition to study's limitations. The course also had several limitations. First, each class session lasted approximately six hours and all classes were held during the work week. While the co-authors believe that this level of intensity supported the mission of changing habits of mind, this schedule may have limited the number of participants that were able to attend. Second, no physical therapists enrolled in the course. Although one of the instructors was a physical therapist, additional physical therapists could have contributed to the course dialogue and the class could have further explored interdisciplinary practice. Future course offering would warrant additional recruitment efforts to specifically target physical therapists.

Despite the limitations, results from the current study suggest that the instructional methods used in the summer seminar based on transformative learning theory may have influenced the participants' habits of mind. Transformative learning theory was an appropriate match for the course objectives and should be considered by other health educators when designing professional development opportunities.

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