

Occupational Therapy's Perspective on the Use of Environments and Contexts to Support Health and Participation in Occupations

Purpose

This paper articulates the position of the American Occupational Therapy Association (AOTA) regarding how, across all areas of practice, occupational therapy practitioners¹ select, create, and use environments and contexts to support clients' health and participation in desired occupations.

Introduction

The value and purpose of occupational therapy is to support the health and participation of clients by engaging them in their desired occupations (AOTA, 2008). *Occupations* are activities that “reflect cultural values, provide structure to living and meaning to individuals; these activities meet human needs for self-care, enjoyment, and participation in society” (Crepeau, Cohn, & Schell, 2003, p. 1031). Where and how occupational therapy services are provided is based on the notion that clients' engagement in occupation is inextricably situated in environments and contexts. **The *environment* refers to external physical and social aspects that surround clients while engaging in the occupation. *Contexts* are the cultural, personal, temporal, and virtual aspects of this engagement; some contexts are external to the client (e.g., virtual), some are internal to the client (e.g., personal), and some may have both external features and internalized beliefs and values (e.g., cultural) (AOTA, 2008).**

Occupational therapy practitioners view human performance as a transactive relationship among people, their occupations, and environments and contexts.

Using their expertise in analyzing these complex and reciprocal relationships, occupational therapy practitioners make recommendations to structure, modify, or adapt the environment and context to enhance and support performance. Both environment and context influence clients' success in desired occupations and therefore are critical aspects of any occupational therapy assessment, intervention, and outcome. This assumption is consistent with current educational and health care laws and policies that stipulate that assessment and intervention by providers take place in the natural and least restrictive environments that support the client's successful participation (Americans with Disabilities Act of 1990; Individuals with Disabilities Education Act Amendments of 2004; *Olmstead v. L.C. and E.W.*, 1999).

Occupational Therapy Process

Occupational therapy practitioners support people where life is lived. To support people to live meaningful lives in environments and contexts that best meet their needs and desires, practitioners interpret a wide range of laws, regulations, and standards as they seek to maintain the integrity and values of the profession to benefit clients. Table 1 reviews key legislation related to occupational therapy intervention and how these laws apply to practice.

¹When the term *occupational therapy practitioner* is used in this document, it refers to both occupational therapists and occupational therapy assistants (AOTA, 2006). *Occupational therapists* are responsible for all aspects of occupational therapy service delivery and are accountable for the safety and effectiveness of the occupational therapy service delivery process. *Occupational therapy assistants* deliver occupational therapy services under the supervision of and in partnership with an occupational therapist (AOTA, 2009).

Occupational therapy practitioners engage in a collaborative process with clients to identify clients' strengths and barriers to health and participation in society. As part of this process, practitioners consider a variety of personal, environmental, and contextual factors that guide the evaluation, intervention, and expected outcomes of occupational therapy services. Personal factors such as clients' age, time of intervention during the life course, service delivery environments, clients' or caregivers' goals, clients' occupational performance, and the services available can guide the decision-making process.

Occupational therapy practitioners "engineer" the environment as they consider the occupational needs of clients in their lived environments. They analyze performance in relation to how features of the environment and context support learning and performance and generate practical solutions to solve problems. For example, practitioners recommend modifications to improve the physical accessibility of kitchens for clients who desire to engage in the occupation of cooking while using their wheelchairs. Practitioners also may add visual cues around the kitchen to structure cooking tasks to increase safety for people with cognitive limitations.

Occupational therapy practitioners recognize that the provision of service in environments and contexts are linked to the purpose of the intervention. Depending on the needs of clients, practitioners understand that environments and contexts will vary from natural to a modified environment that has a more planned structure. For example, a client with difficulty organizing his or her daily routine initially may function better in a structured social program. The intervention goal then is to diminish the need for structured programming to gain self-sufficiency in organizing and planning daily life.

The dilemma in decision-making about what type of environment and context best supports clients' participation in life along a continuum of natural to more structured directly relates to clients' occupational performance. With the value of participation and health, there is a drive toward customizing interventions to suit the person, population, or organization's desired abilities. For example, when someone needs to learn or relearn safety and emergency maintenance, it is optimal to teach him or her with the specific emergency alert system that he or she will actually use.

However, sometimes the natural environment and context initially may pose too many demands or not provide enough support. In such circumstances, it may be more advantageous for people to gain specific skills in occupational competence in a more structured environment and, with practice and feedback, incrementally learn to apply these skills and occupations to the natural environment. Occupational therapy practitioners are sensitive to how the structured or natural environments provide supports or barriers and continuously monitor and adjust these environments to support clients' occupational performance.

It is the intent that these structures be reduced as clients gain competence. For example, during inpatient rehabilitation, an adult with a spinal cord injury would practice community mobility and upon discharge to home would be able to use public transportation. In contrast, some individuals may be better able to participate in daily life occupations when they move from a natural to a more structured environment. For example, an adult with serious mental illness

initially may experience enhanced occupational performance in a community group home rather than in a private home.

To narrowly define natural environment and structured environments may risk limiting clients' engagement or participation in meaningful occupations. Ultimately, interventions support clients where life is lived: in their homes, classrooms, playgrounds, work, and recreation or community centers, wherever their occupations take place. Providing intervention in these settings is consistent with the values and purpose of occupational therapy. Practitioners provide services in the natural environment and least restrictive environment whenever possible. They also realize that many factors such as limited financial, organizational, and personnel resources and the complexity of the client's condition may constrain this service delivery option. When this occurs, they make recommendations for continuing interventions beyond the immediate setting.

Providing opportunities for all members of society to engage in health-promoting occupations, flexibility in the analysis of the environment and context in which clients thrive is essential. Table 2 provides examples of how occupational therapy practitioners use and modify environments to support health and participation in occupations.

Summary

Occupational therapy practitioners work with a wide variety of clients across the life span. The goal of occupational therapy is to support health and participation in life through engagement in occupation (AOTA, 2008). Occupational therapists consider current educational and health care laws and policies as they make recommendations to modify, adapt, or change environments and contexts to support or improve occupational performance. On the basis of theory, evidence, knowledge, client preferences and values, and occupational performance, occupational therapists assess the intervention settings and environmental and contextual factors influencing clients' occupational performance. Interventions and recommendations focus on selecting and using environments and contexts that are congruent with clients' needs and maximize participation in daily life occupations. Practitioners' expertise is essential to support clients' health and participation in meaningful occupations.

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Table 1. Legislation and Court Cases Related to Occupational Therapy Practice

Federal Law/Court Case/Movement	Key Constructs	Application to OT Practice
<p>Rehabilitation Act of 1973, Section 504</p>	<ul style="list-style-type: none"> • Creates an obligation not to discriminate on the basis of special education needs for individuals with disabilities • Helps ensure students with disabilities receive the services, supports, and accommodations necessary to meet their needs • Specifically states “SEC. 504. No otherwise qualified handicapped individual in the United States, as defined in section 7(6), shall, solely by reason of his handicap, be excluded from the participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance” 	<ul style="list-style-type: none"> • Has implications for providing services to all individuals with disabilities in any program funded with federal funds • Addresses services for students with disabilities to ensure participation and access to the general education curriculum
<p>No Child Left Behind Act (NCLB, 2002)</p>	<ul style="list-style-type: none"> • Is the most recent re-authorization of ESEA (see above). • Expands accountability standards for public education • Includes children with disabilities in the accountability models developed to gauge student and school success 	<ul style="list-style-type: none"> • Creates increased motivation for schools to use all existing resources to improve student achievement • Along with IDEA 2004, gives rise and momentum to models of schoolwide support such as response to intervention and positive behavioral supports. • Creates broader opportunities for OT to benefit students with and without disabilities
<p>Individuals with Disabilities Education Improvement Act (IDEA, 2004)</p>	<ul style="list-style-type: none"> • Follows up on the Elementary and Secondary Education Act (ESEA) of 1965, which authorized grants to state institutions and state-operated schools devoted to the education of children with disabilities • Expands and renames the Education of All Handicapped Children Act of 1975 and the successor Individuals with Disabilities Education Act of 1997. • Reauthorizes and expands the discretionary programs, mandates transition services, defines assistive technology devices and services, and adds autism and traumatic brain injury to the list of categories of children and youth eligible for special education and related services • Requires that “removal of children with disabilities from the regular educational environment occurs only if the nature or severity of the disability is such that education in regular classes can not be achieved satisfactorily” [34 C.F.R. 300.114(a)(ii)]. 	<ul style="list-style-type: none"> • Clearly establishes OT as a primary service in early intervention and specifically identifies OT as a related service under Part B for school-age children • Changes how society views children with disabilities; opens doors for participation; and raises expectations of productivity, dignity, and independence

Federal Law/Court Case/Movement	Key Constructs	Application to OT Practice
Social Security Amendments of 1965 (Medicare)	<ul style="list-style-type: none"> Establishes a national public health care program to meet the needs of older Americans and people with disabilities (Social Security Disability Insurance) who qualify for service on the basis of disability status and a sufficient work history. Under Part A, covers expenses associated with inpatient hospital stays, skilled nursing facilities, and some home health care Under Part B, covers approved outpatient physician services, outpatient hospital services, certain home health services, and durable medical supplies and equipment 	<ul style="list-style-type: none"> Creates a system of health care financing and insurance for older Americans Creates a steady funding stream for health care, including OT Focuses mainly on specific health care issues and is not as involved in providing social supports and services as is Medicaid
Older Americans Act (OAA)	<ul style="list-style-type: none"> Establishes a system and network for social, health, and community support for older Americans Creates a network of local, regional, and state Area Agencies on Aging (AAAs) and provides broad federal grants to meet identified needs Allows local AAAs to use funding to best meet the needs within their communities 	<ul style="list-style-type: none"> Provides flexible funding options that support OT services in community health and social services programs for seniors Increases focus and desire for community-based living resources and aging in place
Omnibus Budget Reconciliation Act of 1987 (Federal Nursing Home Reform Act)	<ul style="list-style-type: none"> Creates a set of national minimum standards of care and rights for people living in certified nursing facilities Requires nursing homes to develop individualized care plans for residents that focus on maintaining or improving the ability to walk, bathe and complete other ADLS absent of medical reasons Requires nursing homes to develop individualized care plans for residents and training of paraprofessional staff Protects residents' right be free of unnecessary and inappropriate physical and chemical restraints 	<ul style="list-style-type: none"> Creates opportunities for OT practitioners to facilitate balanced lifestyles and healthy routines in institutional care settings often in partnership with Nursing (Restorative Nursing Programs), Activities staff, and other departments. OT practitioners may advocate to support the needs of older adults and their families and caregivers by addressing environmental modifications and adaptations needed for maximum performance and safety, both in personal environments (wheelchairs, beds...) as well as bedrooms, bathrooms and common areas.
Americans with Disabilities Act (ADA) of 1990	<ul style="list-style-type: none"> Extends previous civil rights legislation Provides a clear mandate to end discrimination against people with disabilities in all areas of life Includes five titles that address employment, state and local government services, transportation, public accommodations (i.e., public places and services), and telecommunications 	<ul style="list-style-type: none"> Supports initiatives and interventions that promote function and participation for people with disabilities across the life span Supports independent living, accessibility, environmental modifications, and other reasonable accommodations

Federal Law/Court Case/Movement	Key Constructs	Application to OT Practice
<p>Independent Living Movement (Batavia, 1999)</p> <p>1972—First independent living center opens</p>	<ul style="list-style-type: none"> • Is an important part of the broader movement for disability rights • Supports the premise that people with even the most severe disabilities should have the choice of living in the community • Supports an individual to use personal assistance services to manage his or her personal care, to keep a home, to have a job, to attend school, to worship, and to otherwise participate in the life of the community • Advocates for the removal of architectural and transportation barriers that prevent people with disabilities from sharing fully in all aspects of society 	<ul style="list-style-type: none"> • Supports OT evaluation and intervention to be provided in natural environments where people live, work, and play and to adapt to and encounter the realities of the physical, social, attitudinal, and political contexts • Intervention includes consultation, program development, and advocacy with teachers in schools, supervisors in jobs, citizens’ organizations, local governments, businesses, local media, and advocacy organizations
<p><i>Olmstead v. L.C. and E. W.</i> (1999)</p>	<ul style="list-style-type: none"> • Affirms the right of individuals with disabilities to live in their community in 6–3 ruling by the U.S. Supreme Court against the state of Georgia • Requires states to place people with mental disabilities in community settings rather than in institutions • Dictates that the community placement must be appropriate; that the transfer from institutional care to a less restrictive setting is not opposed by the affected individual; and that the placement can be reasonably accommodated, taking into account the resources available to the state and the needs of others with mental disabilities 	<ul style="list-style-type: none"> • Establishes precedent for an enforcement of a federal mandate for services to be provided in the least restrictive environment and in settings of choice for people with disabilities • Creates opportunities and obligations for OT practitioners to comply with the letter and spirit of the decision by designing intervention to support community living for people with disabilities and remove barriers such as attitudinal, physical, social, and policy related

Note. OT = occupational therapy.

Table 2. Case Studies: Environmental Considerations and Interventions for Specific Populations

Case Description	Environmental Considerations for OT Service Delivery	Selected Examples of OT Interventions Addressing Environments and Contexts	Research Evidence and Related Resources Guiding Practice
<p>A 15-month-old boy was born at 29 weeks' gestation. He has had difficulty sitting up, particularly during feeding, and achieving other developmental milestones. He is living at home with his family.</p>	<p>The focus of intervention is to support the entire family system to sustain their family life while addressing the developmental needs of the child. Intervention is provided in the home with recommendations as to how to adapt the natural environment to support the child's occupational performance and development.</p>	<ul style="list-style-type: none"> • After discharge from the NICU, provide direct intervention in home to promote safety and establish child's developmental skills. • Collaborate with family to structure and modify the physical and social environments within the home to support occupational performance. • Educate caregiver in developmental principles, positioning, activities to facilitate feeding and development. • Consult with family and other members of transdisciplinary team related to supporting family goals. 	<ul style="list-style-type: none"> • Performing everyday activities in the natural setting provides reinforcement and support to achieve and enhance performance and competence (Dunst, et al., 2001; Dunst, Trivette, Hamby, & Bruder, 2006). • Helping families accommodate to demands of daily life with a child with delays helps families develop appropriate and sustainable routines congruent with their values and child's developmental needs (Keogh, Bernheimer, Gallimore, & Weisner, 1998).
<p>A 3-year-old boy with social and emotional regulation challenges attends a center-based pre-school program.</p>	<p>The focus of intervention is to provide early childhood services in an inclusive classroom to enhance the child's opportunities for play with peers in naturally occurring situations that arise in the classroom. OT intervention is integrated into the classroom activities.</p>	<ul style="list-style-type: none"> • Structure play group to promote peer social interaction skills. • Direct intervention with child and parents to promote self-regulation and establish routines to enable child's transitions throughout the day. • Consult with early childhood team to analyze demands of pre-school class and make 	<ul style="list-style-type: none"> • Center-based early intervention services have a positive effect on children's social functioning (Blok, Fukkink, Gebhardt, & Leseman, 2005). • Preschoolers with disabilities perform as well, if not better, when placed in quality inclusive classroom settings and playgroups (Bailey, Aytch, Odom, Symons, & Wolery, 1999; Odom, 2000).

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		<p>recommendations for adaptations to support performance.</p>	<ul style="list-style-type: none"> Parents of children with disabilities commonly report that they perceive inclusive classroom practices as contributing to their child’s self-esteem, confidence, and happiness as well as reshaping their own expectations of their child’s ability to develop and learn with others (Buysse, Skinner, & Grant, 2001).
<p>A 7-year-old student with cognitive, motor, and speech delays participates in a special day class in a public school. He has difficulty processing sensory information, interacting with peers, focusing on academic tasks, using his hands for tasks, and maneuvering on equipment on the playground.</p>	<p>Guided by the child’s needs, the IEP team, which includes the OT and the parents, determines that the child is having difficulty participating with typical peers and benefits from a special day class for students with behavioral challenges. Although such placements are viewed as more “restrictive,” the regular classroom environment currently is overwhelming for the child. The goal of the tailored environment is to provide the structure necessary for the child to learn specific skills for participation in a less-restrictive environment in the future.</p>	<ul style="list-style-type: none"> Educate IEP team about the effect of the environment on sensory processing and the relationship to behavior in school setting. Consult with IEP team and teachers to structure, adapt, and modify the classroom and playground environments so that the child has opportunities to meet sensory needs by participating in vestibular-, tactile-, and proprioceptive-based activities throughout school day. Collaborate with student to help him establish strategies and routines for sensory regulation, emotional and behavioral de-escalation, and appropriate coping skills. Develop a peer buddy system to promote appropriate social interactions with modeling and role play during social group. 	<ul style="list-style-type: none"> Student may attend to classroom instruction for longer periods of time when sensory needs are addressed (Schilling, Washington, Billingsley, & Deitz, 2003). Teaching children self-regulation strategies (a cognitive approach to manage sensory needs) helps children manage their behavior (Barnes, Vogel, Beck, Schoenfeld, & Owen, 2008; Vaughn, Kim, Sloan, Hughes, Elbaum, & Sridhar, 2003). Supporting occupational performance and behavior in a school-age child improves participation at school (Schaaf & Nightlinger, 2007). Suspended equipment and opportunities to carefully monitor various and safe sensory experiences is a hallmark of sensory integration intervention. These opportunities may be available only in a carefully designed environment (Parham et

Case Description	Environmental Considerations for OT Service Delivery	Selected Examples of OT Interventions Addressing Environments and Contexts	Research Evidence and Related Resources Guiding Practice
		<ul style="list-style-type: none"> • Provide direct intervention to facilitate integration of sensory systems in an environment rich in sensory experiences and equipment. 	<p>al., 2007).</p>
<p>A 28-year-old man with schizoaffective disorder lives alone. He has difficulty organizing his daily routines to manage his medications. He was recently admitted to the hospital due to an acute exacerbation of his illness. He wants to be discharged home.</p>	<p>The intervention focuses on developing medication routines to help the client return to his apartment. If unable to manage his medications, he might need to move to a group home with more structured supervision. By analyzing the social and physical environment within the client’s home and community, OT practitioners can identify external cues and resources to optimize client’s occupational performance.</p>	<ul style="list-style-type: none"> • Educate medical team and case manager about performance deficits that affect medication routines. • Request pharmacist/nurse to teach client how to read labels and practice filling medication box correctly. • -Advocate for reminder calls for refills from pharmacy or others. • Teach client skills for medication management to establish habits and routines such as regular sleep/wake times; use of an alarm clock and calendar to track when to take and refill medication; or keeping of medication in a consistent location, such as on a nightstand. • Provide visual cues such as list of medications with pictures and purpose or reminder signs. • Establish connection with mental health support groups. 	<p>Environmental supports are more likely to improve functional behavior for people with schizophrenia when the supports are customized for the person and situated in the person’s home (Velligan, et al., 2000, 2006).</p>
<p>Clients living in a shelter for homeless people desire to meet basic needs, remain safe, and reduce the potential for harm.</p>	<p>Using a consultative model, the intervention focuses on modifying the physical and social environment to promote safety</p>	<ul style="list-style-type: none"> • Establish defined areas and organize schedules within the shelter to enable individuals to engage in self-care, 	<p>Life skills interventions have the potential to support the complex needs of individuals situated within the homeless context (Helfrich, Aviles, Badiani,</p>

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	and meet basic needs of the clients.	<p>education, work preparation, and play–leisure activities.</p> <ul style="list-style-type: none"> • Design physically accessible spaces and equipment to enable individuals to complete basic activities of daily living. • Educate clients in life skills interventions to address the environment demands of homelessness. • Establish a self-governance and grievance committee to address safety within the shelter. • Post emergency procedures and community resources. 	Walens, & Sabol, 2006).
A 52-year-old successful businessman had a right middle cerebral artery stroke with resulting left-sided weakness and decreased balance 1 year ago. He lives at home and has tried to return to his job as a financial consultant but struggled to maintain his productivity at work.	Because this client may not regain all performance skills, intervention focuses on designing environmental modifications in the home, work, and community settings that will support his health and participation in occupations.	<ul style="list-style-type: none"> • Adapt activity demands for participation in necessary and desired occupations. • Modify home environment to optimize safety and reduce the impact of weakness and fatigue (Fange & Iwarsson, 2005; Stark, 2004; Stearns et al., 2000). • Consult with employer to modify the work environment by using assistive technology to change the task demands. • Set up an ergonomically advantageous setting by adjusting work routines and schedule to support work performance (Whiteneck, 	<ul style="list-style-type: none"> • Specific strategies are effective to improve performance skills and participation in roles and routines after stroke (Ma & Trombly, 2002; Trombly & Ma, 2002). • OTs evaluate contextual factors of work environments (e.g., work tasks, routines, tools, and equipment) and use this information to plan interventions that facilitate work performance (AOTA, 2005). • OT practitioners consult with community agencies, business owners, and building contractors, among others, to create environments that promote occupational performance for all

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		<p>Gerhardt, & Cusick, 2004).</p> <ul style="list-style-type: none"> • Consult with community agencies regarding access (e.g., transportation, public bathrooms, timing of crosswalk lights, safe railings). 	<p>(AOTA, 2000).</p>
<p>Older adults living in an assisted-living facility are at high risk for balance and falls.</p>	<p>The focus of intervention is to maintain the clients' occupational engagement through a multifactorial approach such as strength and balance training; education; modifying activity demands; and creating a safe and supportive environment, including falls prevention.</p>	<p>Consult with facility administrators, architects, and facility staff to design environment that</p> <ul style="list-style-type: none"> • Reflects a non-institutional character • Eliminates barriers to physical mobility • Provides lighting without glare • Clusters small activity areas together. 	<ul style="list-style-type: none"> • The design of the social and physical environment influences the function and well being for older adults (Day, Carreron, & Stump, 2000) • OT practitioners advocate for and contribute to the creation of an environment where the demands do not exceed the capabilities of the client (Cooper & Day, 2003). • OT practitioners identify and modify environmental barriers (Davison, Bond, Dawson, Steen, & Kenny, 2005).
<p>A 74-year-old woman lives in an apartment in the inner city with her husband of 45 years. She has a moderate Alzheimer's disease. She has become lethargic and no longer initiates activities. Her husband now does all the shopping, cooking, and cleaning. He is overwhelmed with the demands of caregiving.</p>	<p>The intervention focuses on supporting the caregiver's and the care recipient's health and participation in desired occupations and activities and enabling them to remain in their home as they age.</p>	<ul style="list-style-type: none"> • Educate caregiver about the disease process and the impact of the environment on the care recipient's occupational performance. • Recommend modifications to the home environment to manage daily care activities. • Provide emotional support as well as information on coping strategies and stress management to caregivers. • Facilitate use of community and family support. • Provide support and 	<ul style="list-style-type: none"> • Persons with dementia or Alzheimer's disease can live at home, remaining in their roles and contexts for a longer period of time, if given enough support from caregivers (Haley & Bailey, 1999). • An in-home skills training and environmental adaptation program (Gitlin, Winter, Corcoran, Dennis, Schinfeld, & Hauck, 2003) improves the quality of life for both the caregiver and the care recipient with fewer declines in

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		<p>education for the uses of adaptive equipment in the home.</p>	<p>occupational performance of care recipients and less need for care giving (Gitlin, Hauck, Dennis, & Winter, 2005). Home-based OT is effective and cost efficient for community-dwelling elders and their caregivers (Graff et al., 2008).</p> <ul style="list-style-type: none"> • Persons with Alzheimer's disease perform better at home than in unfamiliar environments; it is harder for them to adapt to new environments (Hoppes, Davis, & Thompson, 2003).

Note. OT = occupational therapy; NICU = neonatal intensive care unit; IEP = individualized education program.

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