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# Pragmatics Intervention for Individuals with Intellectual Disabilities Transitioning to Employment

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DISABILITIES TRANSITIONING TO EMPLOYMENT

by

Lindsay Michelle DeFauw

B.S., Southern Illinois University Carbondale, 2002

A Research Paper
Submitted in Partial Fulfillment of the Requirements for the
Master of Science Degree

Rehabilitation Institute
in the Graduate School
Southern Illinois University Carbondale
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in the field of Communication Disorders and Sciences


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**INTRODUCTION**

The purpose of this paper is to discuss pragmatic deficits and their impact on employment in order to illuminate intervention strategies focused on pragmatic skills for individuals with intellectual disabilities seeking employment. As recently as this year, in an article published in *Pragmatics and Society*, it was suggested that pragmatic deficits are not perceived as a priority in clinical intervention (Cummings, 2011, p. 17). Cummings (2011) noted that, "The social domain, broadly construed, has been too often neglected in clinical communication research" (p. 31). Therefore, the information collected for this paper was based on research investigations conducted by several disciplines, with only a few contributing investigations stemming from the field of speech-language pathology. As a result, an operational definition of pragmatics is required.

**PRAGMATICS**

The American Speech and Hearing Association (ASHA) defined pragmatics as the rules for social language use (ASHA, 2011). Abbedtuo and Hesketh (1997) further defined pragmatics as, "the intentional use of language to achieve interpersonal goals" (p. 323). ASHA provided examples of this use such as, greeting, requesting, talking differently to a baby than to an adult and taking turns in conversation (2011). Shipley and McAfee (2009) provided additional examples such as, describing events, following directions, maintaining appropriate eye contact, attending to tasks, topic maintenance, sequencing actions, and categorizing (p. 295). For other disciplines, such as behavioral psychology, pragmatics is often referred to as social skills (Duan & O,Brien, 1998, p. 235). Sheridan et al. (1999, p. 85) defined social skills as, "discrete learned behaviors exhibited by an individual for the purpose of performing a task." They also provided a definition of social competence suggesting that it is, "concerned primarily with the evaluative judgment of others" (Sheridan et al., 1999, p. 86). The following diagram, taken from Gresham and Elliott (1987, p. 169), indicates the complexity of social competence and cites communication skills within the framework of social skills.

```
                    SOCIAL COMPETENCE

       ADAPTIVE                          SOCIAL
       BEHAVIOR                          SKILLS
```

• Independent Functioning      • Interpersonal Behaviors

• Physical Development         • Self-Related Behaviors

• Self-Direction              • Academic-Related Skills

• Personal Responsibility      • Assertion

• Economic-Vocational          • Peer Acceptance
  Activity
                              • Communication Skills
• Functional Academic
  Skills

**Figure 1: Social Competence**

Though the term pragmatics is not used directly,
"communication skills" in this reference is indicative of the
rules for social communication, i.e. pragmatics. Therefore, for
the purposes of this investigation, when the term "social skills"
is used it should be considered as a reference to the speech-
language pathology area of practice, pragmatics.

**INTELLECTUAL DISABILITY**

Montague (1988) indicated that social skills deficits are often noted in individuals with intellectual disabilities (p. 26). In a broad estimate, it is indicated that millions of people worldwide have intellectual disabilities (Katz & Lazacano-Ponce, 2007, p. 133). The World Health Organization, as sited by Katz and Lazacano-Ponce (2007) provided the following definition:

Intellectual disability (ID) is a disorder defined by the presence of incomplete or arrested mental development, principally characterized by the deterioration of concrete functions at each stage of development and that contribute to the overall level of intelligence, such as cognitive, language, motor and socialization functions; in this anomaly, adaptation to the environment is always affected. (p. 132)

Katz and Lazacano-Ponce (2007) further defined intellectual disability by providing a measure of the disability in terms of severity (p. 135). Intellectual disability can be divided into four categories: mild, moderate, severe and profound (Katz and Lazacano-Ponce, 2007, p. 135). For this investigation it is important to consider the level to which communication and social skills are expected. According to Katz and Lazacano-Ponce (2007) it is reasonable to expect individuals with a mild intellectual disability capable of acquiring the social and work skills needed for employment (p.135). For individuals with a moderate to severe intellectual disability, this acquisition is possible, but

additional supports are typically required (Katz and Lazacano-Ponce, 2007, p. 135). For individuals with a profound intellectual disability, this acquisition is unlikely (Katz and Lazacano-Ponce, 2007, p. 135).

**PRAGMATIC DEFICITS AND EMPLOYMENT**

Elliot et al. (2002) suggested that, for the mild to severely intellectually disabled who attend school, pragmatic deficits usually become most noticeable during the transition process in their final years of school, a time when they are preparing for life after school, i.e. employment (p. 91). Researchers agree that pragmatic skills are critical to employment. Riches and Green (2003) indicated that employment success is largely due to the rate of social integration in the work place (p. 127). O'Reilly et al. (2004) suggested that insufficient social skills play a role in unsuccessful post-school adjustment and are pivotal factors in job retention (p. 400). Additionally, La Paglia (1982) cited social skill deficits as a primary influence on unemployment and underemployment of individuals with disabilities (p. 122).

**Evidence**

Hatton (1998) suggested that research associated with the pragmatic skill levels in naturalistic environments, such as work, for individuals with intellectual disabilities is rare (p. 89). However, Hatton (1998) noted that individuals with intellectual disabilities interact more frequently with support staff than their coworkers, engage in more inappropriate interactions and do not participate as frequently in joking or teasing due to deficits in pragmatic skills (p. 92). Storey (2002) supported this claim by indicating that while physical inclusion in the workplace has been relatively achieved, social

inclusion remains challenging, with many finding themselves socially segregated from their coworkers (p. 231). This claim is further supported by Huang and Cuvo (1997); after reviewing several studies focused on job retention issues for individuals with intellectual disabilities they concluded that poor social skills negatively impacted their employment status as equally as non-social skills (p. 4).

**ASSESSMENT CONSIDERATIONS**

Sheridan et al. (1999) suggested that a key element in assessing social skills is to determine what skills will lead to the most meaningful outcomes (p. 87). In the case of social skills, social validity becomes essential (Sheridan et al., 1999, p. 87). Sheridan et al. defined social validity as, "the degree to which therapeutic changes are socially important to a client"(1999, p. 87). Therefore, Sheridan et al. (1999) suggested that assessment should include pertinent information regarding the environment such as, peers and family and their perceptions and expectations (p. 88). Following the indications of Sheridan, et al. (1999), an assessment of the individual's current skill set, and of the workplace, should be conducted to determine the functional pragmatic skills necessary for employment.

**Evidence:**

Holmes (2003) noted that starting a new job requires more than possessing or learning the skills need to adequately perform the technical requirements (p. 69). When an individual joins a new workplace, "an awareness of its distinctive culture and learning how to use language in new ways to negotiate new meanings with new colleagues", is required (Holmes, 2003, p. 69). Huang and Cuvo (1997) suggested that though a particular set of necessary social skills for individuals with intellectual disabilities have yet to be defined there are several factors to consider; social skills are rule-governed, learned, goal-oriented, situation specific according to context, and include

both observable and non-observable components (p. 8).
Huang and Cuvo (1997) divided these elements into two broad
categories with equal importance for employment: work-related
social skills and non-worked related social skills (p. 9).
Examples of work-related social skills included following the
supervisor's instructions and working independently (Huang &
Cuvo, 1997, p. 9). Examples of non-work related social skills
included communicating and interacting with coworkers (Huang and
Cuvo, 1997, p. 9).

Considering the evidence presented, assessment of social
skills for employment for individuals with intellectually
disabilities should be adjusted to include both the work-related
and non-work related social skills deemed necessary for
successful employment within their given work environment.

**PRAGMATIC INTERVENTION**

Montague (1988) suggested that successful postsecondary adjustment includes employment status, financial stability, self-sufficiency and social acceptance in the community (p. 26). Montague (1988) indicated that to prepare individuals with disabilities for employment, basic communication and interpersonal skills should be the priority and are considered more valuable than technical skills (p. 26). Researchers have employed various methods to train individuals the social skills needed for employment resulting in a "comprehensive training package" (Huang & Cuvo, 1997, p. 23). Huang & Cuvo (1997) indicated the elements of this training package include instruction, modeling, role-play and social feedback (p. 23). Storey's (2002) review of social skills training indicated that one of the most commonly noted, and considered most critical, element of this training is role-playing (p. 232).

**Role-Play**

Role-play involves creating a social scenario and acting it out (Elksnin & Elksnin, 2001, p. 100). To accomplish this, each part of the scenario is divided into a set of tasks, and each task explained to the client (Elksnin & Elksnin, 2001, p. 100). This technique allows the clinician to maintain control of the session, even if scripted; the clinician can alter his or her responses as needed (Elksnin & Elksnin, 2001, p. 100). Role-play also allows the clinician to approach therapy in a functional manner, because it is easily adjustable from setting to setting,

classroom to workplace (Elksnin & Elksnin, 2001, p. 100).

**Evidence**

In a study conducted by La Paglia (1982), the intervention technique of role-playing is examined (p. 123). The study was a single-subject design that focused on a 20-year-old female with intellectual deficits and a track record of unsuccessful employment (La Paglia, 1982, p. 123). The area of difficulty was a social behavior: barging into the employer's office unannounced to ask for help (La Paglia, 1982, p. 123). The act of bursting into the office is an inappropriate social behavior, however, the verbalization of requesting help, is a pragmatic skill (ASHA, 2011). Essentially, in this study, the participant was taught how to have an appropriate conversation with her boss, by learning and practicing the skills needed to do so through role-play. The role-play scenario was conducted over a 7-month period, across three settings: training room, school office and work office (La Paglia, 1982, p. 126). The results of this study indicated that utilizing role-playing is an effective method for training appropriate social skills for the workplace (La Paglia, 1982, p. 127).

Montague (1988) conducted a similar investigation, however, the study included 49 participants, both male and female who were in 10th, 11th, and 12th grade special education classes (p. 27). Additionally, this study focused on multiple social skills that were deemed necessary for employment. These skills were: understanding instructions, asking a question, asking for help,

accepting criticism, ordering job responsibilities, accepting assistance, giving instructions, offering assistance, apologizing and convincing others (Montague, 1988, p. 28). Montague (1988) indicated that the method of role-play was selected because it allows for efficient observation of the participants (p. 28). Like the study conducted by La Paglia (1982), scenarios were created that reflected the typical workplace environment (Montague, 1988, p. 31). However, unlike La Paglia (1982), Montague (1988) only conducted training in a school setting (p. 35). The participants received training over 30 sessions in a 10-week period (Montague, 1988, p. 31). The students were taught in a group setting using direct instruction; the actual techniques of instruction were not indicated (Montague, 1988, p. 35). The results of this study are in agreement with La Paglia's (1982) indications, suggesting that role-play is an effective method for teaching the appropriate workplace social skills (Montague, 1988 p. 40).

Several additional studies demonstrated role-play as a method for teaching individuals with intellectual disabilities the social skills necessary for employment. Five out of ten social skill interventions investigated by Alwell and Cobb (2009) indicated the use of role-play as an effective treatment method (p. 101). Huang and Cuvo (1997) indicated that when paired with video modeling and feedback, role-play was an effective treatment method (p. 21). Additionally, O'Reilly et al. (2004) indicated in their study that role-play was a successful treatment method for

teaching individuals with intellectual disabilities (p. 407). However, in contrast, Hall et al. (2000) suggested only modest support for this method, indicating that some participants performed poorly (p. 322). They suggested this could be due to inconsistent reliability among the practitioners and insufficient sensitivity of the role-play assessment used (Hall et al., 2000, p. 324). However, ultimately, they expressed concern over the validity of role-play as an intervention method (Hall et al., 2000, p. 324).

**GENERALIZATION AND MAINTENANCE**

Role-play has been suggested by many researchers to be an effective intervention method for teaching the social skills necessary for employment to individuals with intellectual disabilities. Duan & O'Brien (1998) stressed that the generalization of skills learned should never be assumed, and that it remains an area of concern for social skill intervention (p. 236). Storey (2002) suggested that the methodology of "train and hope" was often indicated in initial research investigations (p. 235). However, in recent years, researchers and clinicians have begun to indicate the efficacy of social skills treatment methods in terms of generalization to novel situations and environments and the maintenance of those skills over time (O'Reilly et al., 2004, p. 401).

**Evidence**

O'Reilly et al. (2004) indicated that the use of role-play to implement problem-solving and external control social skills was found to be an effective intervention method for generalizing those skills to novel role-plays (p. 411). Additionally, O'Reilly et al. (2004) indicated that the skills learned were maintained for a four-week period following completion of treatment (p. 411). It should be noted, however, that additional data was not collected following the four-week post-training re-evaluation; it was suggested that these results indicate probable continuation of skill maintenance.

Storey (2002) reviewed numerous studies from 1991 to 2001

regarding increasing social interactions in supported employment settings (p. 231). The investigation noted several studies that utilized role-play as a method of social skill instruction (Storey, 2002, p. 232). The studies that utilized role-play as an intervention method for social skill instruction indicated that generalization was achieved (Storey, 2002, p. 232). However, it was not indicated clearly the duration the learned social skills were maintained (Storey, 2002, p. 232).

Social feedback becomes critical to the generalization and maintenance of these skills, as noted previously as a component of social skill intervention in a "comprehensive training package" (Huang & Cuvo, 1997, p.26). Huang & Cuvo (1997) suggested that to incorporate this element and promote skill generalization and maintenance self-management training is needed (p.26). They suggested that this element of training be incorporated with other treatment methods, i.e. as part of the role-play intervention (Huang & Cuvo, 1997, p. 26). The target skills for successful self-management, as indicated by Huang and Cuvo (1997) are: recognizing the problem, self-instruction to resolution, self-monitoring and performance evaluation (p.26). Huag and Cuvo (1997) suggested that by including this element in the training package reduced levels of inappropriate social skills should be achieved and result in natural affects (p. 27).

**Natural Supports**

Hatton (1998) suggested that generalization and maintenance of pragmatics skills for individuals with intellectual

disabilities is limited due to a lack of ecological validity (p. 91). Storey (2003) indicated that to achieve generalization and maintenance the additional element of natural support is critical (p. 79). Story (2002) defined natural support as a coworker, employer or job coach (or combination) providing assistance to the employee (p. 155). Their assistance includes, but is not limited to, feedback and companionship in terms of facilitating independence or partial independence (Story, 2003, p. 79).

**Evidence**

Storey's (2003) review of eleven studies focused on natural supports for individuals with intellectual disabilities concluded, that when reported, natural supports were successful in aiding generalization of the learned skill(s) to novel situations and environments (p. 81). The review also noted that maintenance of the skill(s) ranged from one week to one year (Storey, 2003, p. 81).

Mautz, Storey & Certo (2001) conducted their own study in an effort to determine the effectiveness of natural supports in the employment setting. They utilized a single-case study design to examine the effects of natural supports on employment for a 40-year-old male with cerebral palsy, epilepsy and a severe intellectual disability (Mautz, Storey & Certo, 2001, p. 258). The participant was considered non-verbal, but was able to approximate greetings and did so on occasion when provided with cues and utilized an adaptive communication device (Mautz, Storey & Certo, 2001, p. 258). The participant received natural support

from a job coach and coworker; data collection and intervention occurred on the job-site during business hours (Mautz, Storey & Certo, 2001, p. 259). The data collected included the frequency and type of interaction; initiating, continuing and terminating a conversation; where and with whom the conversation occurred; the conversational topic; appropriateness of the conversation in terms of time; occasion and conversational partner; and the task that the participant was working on at the time of the conversation (Mautz, Storey & Certo, 2001, p. 259). Measurements of intervention were taken three times a day, one to three times per week in 20-minute observations (Mautz, Storey & Certo, 2001, p. 259). The measurement of skill maintenance was taken at the conclusion of training at a frequency of one time per week for three weeks (Mautz, Storey & Certo, 2001, p. 263). Though the study had numerous factors to consider, the overall conclusion was that with natural supports the participant was able to demonstrate social skill acquisition, generalization and maintenance across settings (Mautz, Storey & Certo, 2001, p. 263).

Storey conducted an updated review to investigate strategies for increasing interactions in supported employment settings; this study is previously mentioned in reference to the intervention method of role-play (Storey, 2002). The review included ten studies focused on increasing social interactions in employment settings with natural supports (Storey, 2002, p. 223). The updated review indicated that intervention with the inclusion

of natural supports resulted in generalization to novel settings in five out of the ten studies (Storey, 2002, p. 223). Maintenance of the acquired skills was noted for five out of the ten studies, with a range from one week to six months (Storey, 2002, p. 223).

It has been indicated that natural supports can effectively promote skill generalization and maintenance. However, they have also been cited as inhibitors. Mautz, Storey & Certo (2001) suggested that a job coach, i.e. natural support, could actually be a barrier to social integration (p. 258). They further suggested that this could be due to their level of training (Mautz, Storey & Certo, 2001, p. 266). Individuals who are not practitioners of speech and language often train job coaches and other natural supports in a manner of hours (Mautz, Storey & Certo, 2001, p. 264). This is further supported by more recent research conducted by D'Agostino and Cascella (2008); they indicated, "speech–language pathologists rarely provide services in the vocational context"(p. 2). They also suggested that no research exists regarding the level of communication training and efficacy of that training for communication supports, i.e. natural supports (D'Agostino & Cascella, 2008, p. 2). D'Agostino and Cascella (2008) conducted a research study to determine the level of communication education and competency of natural supports that assist individuals with disabilities in employment settings. Their research noted that of the 36 participating job coaches, not one had a Master's degree education and 75% had not

consulted with a speech and language pathologist (D'Agostino & Cascella, 2008, p. 3). However, most had some training in communications (D'Agostino & Cascella, 2008, p. 3). They also indicated the level of competency of the job coaches by evaluating their ability to accurately describe communication difficulties, strategies, assessment, AAC, symbolic communication, intentional communication and communication breakdowns (D'Agostino & Cascella, 2008 p. 7). The participating job coaches were able to describe communication difficulties with 100% accuracy, strategies with 88% accuracy, assessment with 83% accuracy, AAC with 70% accuracy, symbolic communication with 42% accuracy, intentional communication with 43% accuracy and communication breakdowns with 60% accuracy (D'Agostino & Cascella, 2008, p. 8). Though the job coaches were able to accurately describe many of the areas, the results indicated a gap in knowledge specifically within symbolic and intentional communication and communication breakdowns (D'Agostino & Cascella 2008, p. 8). D'Agostino and Cascella (2008) noted that these gaps in knowledge are critical; they suggested that these areas of need are the most typically occurring for individuals with intellectual disabilities (p. 8). Additionally, D'Agostino and Cascella (2008) suggested that job coaches would benefit from training provided by a speech-language pathologist (p. 9).

Based on their education level and competency, natural supports exhibit the potential to be both a positive and negative contributor to skill generalization and maintenance (Mautz,

Storey & Certo, 2001, p. 266).

**SUMMARY**

The acquisition and appropriate use of pragmatic skills is critical for gaining and sustaining employment, particularly for individuals with intellectual disabilities. This investigation indicated that no matter the pragmatic assessment instrument, it is imperative to consider the social/work environment in which the skills will be utilized and to identify the specific functional skills needed for the given environment. Although it is noted that many methods are used to implement social skills training for these individuals, this investigation focused on the evidence related to a comprehensive training package centered on role-play and natural supports. Based on numerous reviews and studies, a comprehensive training package is indicated as an effective method for teaching individuals with intellectual disabilities the necessary pragmatic skills for employment.

**IMPLICATIONS ON PRACTICE**

One of the most common challenges for individuals with intellectual disabilities entering the workplace, or a new workplace, is the appropriate use of language in social situations, i.e. pragmatics (Holmes, 2003, p. 79). The job for the practitioner involved in assessment and intervention is to identify and teach the skills functionally relevant to employment while maintaining social validity. Additionally, and perhaps the most challenging for the practitioner, is to address generalization and maintenance of the skills. Interestingly, speech-language pathologists are rarely noted in this particular type of assessment and intervention. Considering the complexity of the assessment and interventions needed, it is surprising that speech-language pathologists are not more involved. Additionally, at present, it appears that the predominant practitioners of these skills generalization and maintenance are natural supports within the employment setting. Curiously, nowhere in the body of research reviewed did it indicate the use of a speech-language pathologist to train the natural supports.

It appears there is a mismatch between the knowledge levels of the individuals conducting assessment and providing intervention and support to employees with intellectual disabilities in the area of social skills. This is a disheartening finding. Speech-language pathologists are considered to be professional, licensed experts in the practice of pragmatic assessment and intervention, yet individuals with

very little training in this area are providing these services. Therefore, this becomes an area of interest and concern for the practice of speech-language pathology. Additionally, in the research reviewed it was noted that the level of training of the practitioners was perhaps a barrier to the client's success. This finding reinforces the need for speech-language pathologists to become more involved in this type of assessment, intervention and support.

**FUTURE DIRECTIONS**

"Social skills" is a term used broadly, with multiple definitions across disciplines. Through this investigation it was noted that in many cases social skills included behavioral skills as well as speech-language skills. For future research it would be helpful to separate the social skills based on those distinctions. This would also be helpful for therapeutic interventions. For example, a behavioral therapist could work in tandem with a speech-language pathologist to address these deficits areas with each one focusing on their area of expertise. Perhaps by making this distinction, it will open the door for speech-language pathologists to become more involved in clinical practice and research investigations in the area of pragmatics, particularly those required for employment. It would also be helpful for future research if a formal list of the pragmatic skills required for employment was established. Future research should place additional consideration on maintenance of the pragmatic skills learned. Many studies reported on generalization, but few indicated how long the newly acquired skills were maintained. Natural supports are suggested as a means to improve both skill generalization and maintenance, but are also indicated as a potential barrier. Additionally, future research should focus on the environment in which intervention should occur. A variety of intervention environments were considered, but little attention was paid to indicate which environment(s) proved to be the most efficient and effective for

intervention and generalization. Finding the most appropriate, efficient and effective combination of intervention and support for each individual is necessary, and becomes increasingly critical as the they age and transition to a different employment setting.

**CONCLUSION**

For individuals with intellectual disabilities who present with pragmatic deficits, obtaining and sustaining employment can be challenging and pragmatic intervention is warranted. As speech-language pathology continues to grow as a profession and adapt as a discipline, it is hoped that speech-language pathologists become more involved in this type of assessment, intervention and support. The role of the speech-language pathologist working with these individuals is to help them communicate effectively and, ultimately, improve their quality of life. For individuals with intellectual disabilities, that often means getting and keeping a job.

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