CONVERSATIONAL INTERACTIONS BETWEEN INTELLECTUALLY DISABLED AND NORMAL ADOLESCENTS DURING A PROBLEM-SOLVING TASK

BY

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A Thesis
Submitted to the Faculty of Graduate Studies
in Partial Fulfillment of the Requirements
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A Thesis/Practicum submitted to the Faculty of Graduate Studies of the University of Manitoba in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

DEDICATION

With thanks to my husband,

Bruce Okrainec

and

to my parents,

John and Audrey Goodman

In the year of our Lord,

1997.

Alexa Okrainec

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As this research endeavor concludes, I wish to acknowledge the exemplary scientific and educational leadership of my research advisor, Jeffry Hughes (Education), and of my committee members - Joseph Pear (Psychology), Stuart Ritterman (Communication Disorders), Beverley Zakaluk (Education), and Ann Eisenberg (External Examiner).

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ABSTRACT

This investigation examined verbal disagreements arising between "mildly intellectually disabled" adolescents and their "normal-progress" peers during a problem-solving task, the Fort Walsh (CLASS, 1987) computer exercise. Recordings of 25 "mildly intellectually disabled" - "normal-progress" pairs (12 male and 13 female dyads) were made. Disagreements arising in this social studies lesson were identified and coded using an adaptation of Eisenberg's (1992) analysis scheme for verbal conflicts.

Compared to the normal-progress learning partners, the mildly intellectually disabled adolescents demonstrated differences in the conversational strategies that they employed for negotiating disagreements. The normal-progress students initiated disagreements almost twice as often as the intellectually disabled students. The hypothesis that intellectually disabled students would initiate conflicts less frequently than normals was confirmed (p-value = .0005). Single-turn "compliance" exchanges occurred 48% of the time. Of these "compliance exchanges", 61.8% resulted when the normal-progress peer initiated opposition and the intellectually disabled student failed to pursue the conflict. Some differences in the speech acts opposed were apparent. Higher level conflict initiating moves were employed less frequently by the intellectually disabled students. Normal-progress peers used the "question/challenge" conflict initiating move significantly more frequently than their intellectually disabled counterparts (p-value = .0001). When the conflict initiating move was a "simple no", there was no evidence that conflicts continued beyond a single turn (p-value = .70). Conflicts initiated with a "justification" were marginally shorter than dissension episodes starting with "other"

conflict initiation moves (p-value = .0316). Conflicts initiated with an "alternative" were not shorter than conflicts initiated with "other" conflict initiating moves (p-value = .5218). Where negative affect was present, negative affect typically was demonstrated by both participants (p-value = .0479). "Standoff" was not a prevalent conflict outcome, occurring only 20.9% of the time. The hypothesis that the intellectually disabled student would submit more frequently was nonsignificant (p-value = .0893). Normal-progress students did not take the last conversational turn significantly more often, (p-value = .0784).

Participants were administered: (a) the Test of Pragmatic Language (Phelps-Terasaki & Phelps-Gunn, 1992); and (b) a test of general language ability, the Test of Adolescent and Adult Language (Hammill, Brown, Larsen, & Wiederholt, 1994). Mildly intellectually disabled adolescents demonstrated pragmatic and general language impairments.

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CHAPTER I

INTRODUCTION

Background to the Study

The role of conflict as a powerful impetus to the development of a child's social behavior has been argued persuasively by theoreticians and demonstrated empirically by researchers studying normally developing children (Bearison, 1982; Bearison, Magzamen, & Filardo, 1986; Miller & Brownell, 1975; Weinstein & Bearison, 1985). Conflict is an important tool for promoting and enhancing development and cognitive change (Piaget, 1932, 1958). Furthermore, theoreticians have proposed that conflict events are critical to both the child's ego development (Erikson, 1963) and moral development (Kohlberg & Gilligan, 1972). Conflict is thus necessary for growth. The social environment can enhance or inhibit this development (Martin, 1994).

Despite the long-standing assertion of the importance of conflict in development, there is a paucity of research into the conflict resolution of students with intellectual impairments. This is perplexing because the current emphasis on cooperative learning strategies (D. W. Johnson & R. T. Johnson, 1991) is likely to expose intellectually disabled students to conflict situations with their normal-progress peers. However, we currently know little regarding the ability of intellectually disabled individuals to "manage

the give and take of everyday conversation, to gain and hold the floor, to explain and resolve problems, to handle a variety of instrumental and social interactions" (Sabsay & Platt, 1985a, p. 3). Conflict is important for learning (Bearison et al., 1986; Forman & Kraker, 1985), therefore, it is important to gain a better understanding of the conflict negotiation skills of intellectually disabled students in interactions with their normal-progress peers. The need for a better understanding is imperative because research into the conflict resolution of individuals with mental retardation has been scant (Affleck, 1975a; Bradley & Meredith, 1991; Hewitt, Duchan, & Segal, 1993; Hughes & Lyles, 1994; Sherman, J. B. Sheldon, Harchik, Edwards & Quinn, 1992). Since conflict events and social exchanges are so critical to development, it is essential to advance our understanding about how mildly intellectually disabled adolescents negotiate verbal disagreements.

Currently, there is no comprehensive description of the pragmatic and general language abilities of mildly intellectually disabled adolescents or of their behavior in conflict dialogues. Since conflict is negotiated through talk (Garvey & C. U. Shantz, 1992), an evaluation of intellectually disabled students' language skills is foundational to a study on verbal conflict. Also, understanding how intellectually disabled students perform during the initiation, maintenance, and resolution of conflict dialogues is of paramount importance.

Statement of the Problem

The first major concern is that the general and pragmatic language skills of intellectually disabled adolescents have not been studied in depth. However, it is salient to

know what language abilities these students bring to the task of conflict negotiation. This is especially so if we are to design better learning environments for such students. Therefore, in the education of the intellectually disabled, understanding language abilities is important.

Cooperative learning has assumed prominence as a classroom organizational strategy for effectively integrating students with mild intellectual disabilities (D. W. Johnson & R. T. Johnson, 1986; Slavin, Madden, & Leavy, 1984). Therefore, research efforts to investigate adequately the efficacy of cooperative learning are essential. Because cooperative learning promotes close collaboration between participants, cooperative learning as an organizational framework is believed to facilitate not only learning but also positive attitudes and relationships among the students. Although this instructional strategy involves group cooperation, individual conflicts and verbal disagreements are a feature of cooperative learning group dynamics (D. W. Johnson, R. T. Johnson, & Smith, 1995). However, a comprehensive review of the literature failed to identify any studies exploring verbal disagreements arising between intellectually disabled students and their normal peers. Hence, the second major concern is that little empirical evidence exists regarding how intellectually disabled students function in conflict dialogues. This lack of research into conflicts between intellectually disabled students and their peers is puzzling in light of the extensive promotion of cooperative learning as a highly effective strategy in mainstreamed settings, especially when it is understood that the strategy involves learners in verbal conflict. If mainstreaming efforts and cooperative learning strategies continue to expose intellectually disabled students to conflict episodes in learning contexts, it is important for researchers to provide greater information

regarding how students with intellectual disabilities behave in conflict situations. This information is essential because mainstreaming and cooperative learning contexts are liable to bring mildly intellectually disabled adolescents into even more conflicts with their peers in the classroom. The lack of scientific inquiry into conflict and verbal disagreements in cooperative learning groups limits our understanding of the way such learning groups operate. This, in turn, constrains the ability of educational practitioners to structure cooperative learning groups to the advantage of all participants.

Purpose of the Study

One important goal of the study is to describe the language performance of adolescents with mild intellectual disabilities. Scudder and Tremain (1992) stated:

> Children with mental retardation often lack the conversational skills needed to be viewed as effective communicators by peers, teachers, and others (Spradlin, 1968). The lack of interpersonal communication skills is a defining characteristic of persons with mental retardation (Grossman, 1983) (p. 277).

Although much research into the language abilities of individuals with intellectual disabilities has been conducted (with other age groups or severity levels), there is no comprehensive description in the literature of the pragmatic and general language of adolescents with mild intellectual disabilities. Since mildly intellectually disabled adolescents are being asked to function in cooperative learning engagements, it is important for educational practitioners to know if these students have the language skills to function effectively in these situations. If mildly intellectually disabled adolescents are expected to use their language skills to participate in learning activities, teachers need to

be aware of these students' limitations and weaknesses in the language domain. Therefore, one purpose of the study is to identify what language skills the mildly intellectually students bring to the task of conflict negotiation.

Another purpose of the study, the primary purpose, is to investigate the verbal disagreements arising between mildly intellectually disabled adolescents and their normal peers. By aiming to describe the various facets of the verbal disagreements that take place between intellectually disabled and normal-progress learners, our understanding of the conflicts that occur within cooperative learning engagements will be enhanced. This has implications for educators dealing with the needs of such students in mainstreamed settings.

Significance of the Study

The theoretical and empirical literature suggests that the ability to negotiate solutions during problem-solving tasks may furnish learners with opportunities for enhancing their intellectual development. Conversational interactions to negotiate strategies for solving problems during learning engagements is one of the central features of cooperative learning, a widely used instructional procedure in North America. Establishing cooperative learning groups remains a highly recommended classroom organizational strategy for teaching intellectually disabled students in integrated settings. However, individuals with intellectual disabilities demonstrate linguistic and pragmatic language impairments which may limit their ability to engage successfully in the type of peer interactions important for negotiating solutions during problem-solving tasks. Therefore, the current investigation sought to determine the verbal competency of

adolescents with intellectual disabilities, and to study how intellectually disabled learners interact conversationally with normal peers in problem-solving episodes. The significance of the study lies in the fact that (a) the pragmatic and general language skills of intellectually disabled adolescents have not been examined previously; and (b) the verbal conflict negotiation of intellectually disabled – normal pairs of learners has not been studied in depth. Even more importantly, the study provides important information regarding how mildly intellectually disabled adolescents operate during conflict situations. This information has implications for mainstreaming and cooperative learning. If we can identify issues regarding not only the language abilities of mildly intellectually disabled learners but also their ability to function in conflict dialogues, our understanding of how such students participate in cooperative learning engagements in mainstreamed settings will be enhanced.

Objectives and Hypotheses

Objectives

The current study has two broad objectives:

1. To evaluate and describe the pragmatic language ability and the general language of the two groups of adolescents participating in the study, as suggested in hypothesis 1. The reasons for this evaluation are:

    (a) to provide a comprehensive description of the language of mainstreamed adolescents with mild intellectual disabilities. A comprehensive description of the language abilities of mildly intellectually disabled adolescents is unavailable in the empirical literature; and

(b) to facilitate the interpretation of the conversational strategies that these students employ to negotiate solutions in the problem-solving task. This relates to the generalizability of the findings.

2. To demonstrate and evaluate the conversational strategies that mildly intellectually disabled adolescent learners employ to negotiate disagreements that occur when interacting with a normal peer in a problem-solving task (an educational computer activity). This second objective pertains to hyptheses 2 through 12, stated below in the section entitled "Hypotheses".

Hypotheses

A number of hypotheses were generated based on a review of the literature and from exploratory data obtained during a preliminary study of the verbal disagreements between mildly intellectually disabled adolescents and their peers. In the following section, the hypotheses and a brief rationale for each are presented.

1. ***The Language Skills of Students with Mild Intellectual Disability.***

The research concerning the language abilities of individuals with mild intellectual disabilities led to the formulation of the hypothesis:

Mildly intellectually disabled adolescents will exhibit evidence of pragmatic language impairments and impaired linguistic competence as identified by the Test of Pragmatic Language (TOPL) (Phelps-

Terasaki & Phelps-Gunn, 1992) and the Test of Adolescent and Adult Language (3rd ed.) (TOAL-3) (Hammill et al., 1994), respectively.

2. ***Intellectually Disabled and Normal Adolescents' Strategies for Negotiating Disagreements.***

The research concerning the conflict resolution of students with intellectual disabilities together with a proposed relationship between conflict negotiation and talk led to the following general hypothesis:

> *Mildly intellectually disabled adolescents will demonstrate qualitative and quantitative differences in the conversational strategies that they employ for negotiating disagreements that arise in a dyadic problem-solving task involving a computer-based educational engagement with a normal peer.*

More specific hypotheses, as follows, also were examined.

3. ***Intellectually Disabled Students and the Initiation of Conflict.***

C. S. Cooper (1986) reported that young intellectually disabled children were more reactive conversationally, assuming a respondent role in their interactions with normal peers. One also could argue that intellectually disabled students will initiate conflicts less frequently than normal students based on the premise that language deficits, by their nature, create a power differential and limit collaboration. Sabsay and Platt (1985b) suggested that nondisabled interlocutors

may control interactions with intellectually disabled speakers. Therefore, the following hypothesis was examined:

Intellectually disabled students will initiate verbal disagreements substantially less frequently than intellectually normal students.

4. ***Strategies Used by Students when in the Role of Opposer versus Opposee.***

Eisenberg and Garvey (1981) stated: "in general, the Opposee is trying to influence his partner while the Opposer is resisting influence" (p. 152). The evaluation of intellectually disabled and normal students' verbal strategies when they occupy these two functional roles, Opposer and Opposee, was expected to reveal differences. Therefore, the following hypothesis was examined:

Students, when occupying the roles of Opposer and Opposee, will demonstrate different strategies for influencing their partner.

5. ***Reciprocity of Negative Affect.***

In their study of children's dispute settlement, Brenneis and Lein (1977) noted that negative affect was reciprocated between the parties in the dispute. Gottman (1979) also noted this for married couples. Therefore, the following hypothesis was examined:

In disagreements where negative affect is present, it will be demonstrated by both the Opposer and Opposee.

6. ***"Simple No" as an Initiating Conflict Move.***

Eisenberg and Garvey (1981) stated that most children will not accept a "simple no" as a sufficient form of opposition and that the Opposer is required to give a reason for the opposition, resulting in conflict continuation. Hence, the following hypothesis was examined:

> *When the initial opposition consists of a "simple no", conflicts will be continued beyond the turn containing the "no" response.*

7. ***Explanations as an Initial Opposition.***

This hypothesis is stated in its null form.

> *Conflict length for "justifications", "alternatives", and "other" conflict initiating move types will be equal. That is, there will be no significant difference in conflict length for "justifications", "alternatives", and "other" conflict initiating move types.*

("Other" refers to the other initial oppositions, namely "simple no", "indirect no", "delay/distraction", and "question/challenge".) A detailed description of the "explanations as an initial opposition" hypothesis now follows under the subheadings "Conflict length and Justifications" and "Conflict length and Alternatives".

- *Conflict length and "Justifications".* A justification "is significantly more likely to lead to a termination of the (conflict) episode" (Eisenberg & Garvey, 1981, p. 166). Goodwin and Goodwin (1987) stated that participants may

attempt to achieve closure in a dispute by providing an explanation. (However, they qualified this statement by relating one example in which the provision of justifications engendered extended disagreement, suggesting that there may be individual differences.) Therefore, the following hypothesis was examined:

> *Conflict length will be shorter when the initial opposition contains a "justification".*

- *Conflict length and "Alternatives".* Eisenberg and Garvey (1981) suggested that when an "alternative" proposal is provided as an initial opposition move in the conflict episode, the conflict length will be shorter. Hence, the following hypothesis was examined:

  > *Conflict length will be shorter when the initial opposition contains an "alternative".*

8. Submission by Intellectually Disabled Students and by Peers.

Sabsay and Platt (1985a, pp. 5-6) argued that "it is in interaction with nonretarded interlocutors that disguising or concealing incompetence becomes an overriding concern". Hence, intellectually disabled students may readily submit as a means of disguising their incompetence. Furthermore, Sackin and Thelen's (1984) work on dominance hierarchies suggests that skill in conflict resolution relates to position in the dominance hierarchy. It could be argued that students with intellectual disabilities demonstrate language deficits that limit their skill at conflict resolution

and therefore they readily submit. Therefore, the following hypothesis was examined:

In disagreements during learning engagements, the intellectually disabled student will submit more frequently than the normal-progress peer.

9. *Standoff as a Conflict Outcome.*

Difficulties with topic maintenance (Abbeduto & Rosenberg, 1980) and conversational repair (Abbeduto, 1991; Abbeduto, Davies, Solesby, & Furman, 1991; Longhurst & Berry, 1975; Rueda & Chan, 1980; Scudder & Tremain, 1992) may contribute to a high rate of "standoff" conflict outcome. Hewitt et al. (1993) noted that arguments arising in a group home for the mentally retarded seldom had a definitive resolution (only 18%). Also, Eisenberg (1992) noted that 64.0% of verbal conflicts between mothers and their young children ended in a "standoff". Vuchinich (1987) found that 61.0% of family dinnertime disputes with older children ended in "standoff". Hence, the following hypothesis was examined:

"Standoff" will be a common conflict outcome.

10. *The Last Verbal Oppositional Turn.*

Again, the intellectually disabled student's difficulty with topic maintenance and conversational repair may prevent continuation of the conflict negotiation process. Also, the intellectually disabled student may abort attempts to negotiate perhaps

due to perceived incompetence and attempts to maintain self-esteem. Therefore, the following hypothesis was examined:

The normal-progress student will take the last verbal oppositional turn significantly more often than the intellectually disabled learner.

11. Compliance Exchanges versus Mutual Opposition.

When challenged, intellectually disabled students may respond by not pursuing the conflict, perhaps as Sabsay and Platt (1985a) suggested, to save face with their peers. Furthermore, evidence that individuals with intellectual disabilities experience difficulty with topic maintenance (Abbeduto & Rosenberg, 1980) and with using conversational repair devices (Abbeduto, 1991; Abbeduto et al., 1991; Longhurst & Berry, 1975; Rueda & Chan, 1980; Scudder & Tremain, 1992) has been presented in the literature. It could be argued that one manifestation of these deficits may be a preponderance of short two-turn disagreements. Hence, the following hypothesis was examined:

There will be evidence of compliance episodes (opposition moves made by the intellectually normal student that are not pursued by the intellectually disabled student).

12. Mitigation.

Mitigation avoids creating offense, tempers conflicts, and makes disagreements more like useful negotiations (A. Sheldon, 1992). Hence, the ability to frame challenges indirectly is an important skill to examine. As intellectually disabled

students exhibit language deficits, they may be compromised in their ability to frame challenges indirectly. Furthermore, mitigation has been linked to skill in social perspective-taking. Since students with intellectual disabilities exhibit deficits in social perspective-taking (Bradley & Meredith, 1991), it could be argued that intellectually disabled students will not likely frame their challenges indirectly. Hewitt et al. (1993) reported that residents of a group home for the mentally retarded did not frame challenges indirectly. Therefore, the following hypothesis was examined:

> *Normal-progress peers will be more inclined than the intellectually disabled students to use mitigation, framing their challenges indirectly. That is, the normal-progress students will use the less direct "question/challenge" conflict initiating move significantly more frequently than their intellectually disabled counterparts.*

Definition of Terms

For the purposes of this study, the following definitions apply.

Conflict

In order to study how the student pairs negotiate in a problem-solving task, an operational definition of disagreement/conflict was chosen. Although a variety of definitions of conflict exist (Aboud, 1992; Boggs, 1978; Maynard, 1985a; C. Shantz, 1987; Genishi & DiPaolo (1982); Nicholson, 1991; Vuchinich, 1984), the one-opposition criterion of conflict proposed by Hay (1984) and by Eisenberg and Garvey (1981) was

adopted for the present study. According to Hay (1984), conflict is manifested "when one person does something to which a second person objects" (p. 2). Thus, opposition is sufficient for defining conflict.

Mutual Opposition versus Compliance Exchanges

Some scholars reserve the term "conflict" for exchanges involving mutual opposition (C. U. Shantz, 1987; D. W. Shantz, 1986). Conflict expressed through mutual opposition by the interactants (A. Sheldon, 1992) defines "mutual conflict". Laursen and Hartup (1989) differentiated simple two-unit exchanges from longer ones, and termed the two-unit exchange a "compliance exchange" (p. 283). In the current study, two-unit conflict exchanges are distinguished apart from instances of mutual opposition. In so doing, the extent to which the student pairs engaged in "compliance exchanges" versus longer disagreements could be determined. Short two-term disagreements differ from longer ones, are not very intense, and are resolved mainly by insistence rather than negotiation (Laursen & Hartup, 1989). Since disagreements involving negotiation are adaptive for learning and since individuals with intellectual disabilities may acquiesce, it is relevant to distinguish "compliance exchanges" from instances of "mutual opposition". Hence, the Hay (1984) definition was chosen as the criterion for "conflict" because it does not ignore two-unit exchanges which may offer insight into the strategies that intellectually disabled students employ in learning engagements.

Since this was a study of conversation, all conflicts had to be strictly "conversational" in order to undergo analysis. Misreading of words that were corrected

by a learning partner were not identified as conversational verbal disagreements. Instead, these were deemed to be "miscue" corrections (as for example, when one student reads "long knight" and the partner supplies the correction, saying "long knives").

Opposer (Initiator of Conflict) and Opposee

The student who makes the initial verbal opposition is the Opposer (OR), and her/his interactive partner becomes the Opposee (OE) (Eisenberg & Garvey, 1981).

Speaker Turn

The definition of "speaker turn" that was used in the current study is "all of one speaker's utterances bounded by the utterances of another speaker" (Dunn, Brown, Slomkowski, Tesla, & Youngblade, 1991, p.1355).

Mental Retardation

Several definitions of "mental retardation" exist. Drew, Hardman, and Logan (1996) describe "mental retardation" as a "definition in transition" . Earlier definitions by the American Association on Mental Retardation (AAMR) (Grossman, 1983) and by the American Psychiatric Association (1987) have been revised. Recent definitions have been published both by the AAMR (1992) and by the American Psychiatric Association (DSM-IV, 1994). Furthermore, another definition is included in Public Law 101-476, the Education of the Handicapped Act (Goodman, 1976) amendments of 1990. The current AAMR definition of "mental retardation" states that:

> *Mental retardation* refers to substantial limitations in present functioning. It is characterized by significantly sub-average intellectual functioning, existing concurrently with related limitations in two or more of the following applicable adaptive skill areas: communication, self care, home

> living, social skills, community use, self-direction, health and safety, functional academics, leisure, and work. Mental retardation manifests before age 18 (AAMR, 1992, p. 1).

Although earlier AAMR definitions of "mental retardation" (Grossman, 1983) employed a classification system indicating degree of retardation (mild, moderate, severe/profound), the 1992 AAMR definition specified intensity of the supports needed by an individual with "mental retardation", rather than severity levels (Greenspan, 1994). The four levels of support are: (a) intermittent; (b) limited; (c) extensive; and (d) pervasive (Drew et al., 1996). The American Psychiatric Association (DSM-IV, 1994) categories for "mental retardation" include: (a) mild mental retardation, with IQ levels of 50-55 to approximately 70; (b) moderate mental retardation, with IQ levels of 35-40 to 50-55; (c) severe mental retardation with IQ levels of 20-25 to 35-40; (d) profound mental retardation with IQ levels less than 20 or 25; and (e) mental retardation, severity unspecified.

For the purpose of this study, the population of interest was adolescents demonstrating "mild mental retardation" or who are "educable mentally retarded". (An alternative term that appears in the literature for "mildly mentally retarded" is "educable mentally retarded" [EMR] [MacMillian, Meyers, & Morrison, 1980]). The severity level "mild" has been retained for the purposes of this study as much of the existing research in the field of mental retardation has employed severity levels to identify the subjects. Furthermore, the American Psychiatric Association (DSM-IV, 1994) is still using severity classifications. Educational practitioners are familiar with the terminology pertaining to severity levels, therefore the term "mild" was retained.

The term "intellectual disability" is replacing the term "mental retardation" in the literature. Therefore, in this study, the term "intellectual disability" is preferred over the term "mental retardation". The International Association for the Scientific Study on Intellectual Disabilities (IASSID, 1996) organization favors this nomenclature. Furthermore, the Journal of Intellectual Disability Research has adopted the term "intellectual disability" rather than related terms such as "mental retardation" or "mental deficiency".

Social Intelligence

The American Association on Mental Retardation (AAMR) described "social intelligence" as follows:

> *Social intelligence* refers to the ability to understand social expectations and the behavior of other persons and to judge appropriately how to conduct oneself in social situations. The principal components of social intelligence are social awareness and social skill. More specifically, they include social comprehension, insight, judgment, and communication (AAMR, 1992, p.15).

Mainstreaming

In the 1970s and '80s, an important change in the education of students with mild academic handicaps, such as mild mental retardation, took place. These students, once taught in self-contained classrooms, were integrated into regular classes for part or all of their school day, with supports (Slavin et al., 1984). This trend towards the integration of students with mild learning handicaps was accelerated by the passage of Public Law 94-142 (Goodman, 1976).

> *Mainstreaming* can be defined as the provision of an appropriate educational opportunity for all handicapped students in the least restrictive alternative, based on individualized education programs, with procedural

> safeguards and parent involvement, and *aimed at providing handicapped students with access to and constructive interaction with nonhandicapped peers* (D. W. Johnson & R. T. Johnson, 1980, p.90).

"Mainstreaming is based on the assumption that placing heterogeneous students...in the same school and classroom will facilitate positive relationships and attitudes among the students" (D. W. Johnson & R. T. Johnson, 1986, p. 553).

Cooperative Learning

"Cooperative learning" is a classroom organizational strategy that has been promoted by D. W. Johnson and R. T. Johnson (1991). It is "a group learning process built on the belief that students learn better when they learn together" (Nastasi & Clements, 1991, p. 110). "Cooperation is the only instructional strategy congruent with the goals of mainstreaming" (D. W. Johnson & R. T. Johnson, 1986, p. 553). Cooperative learning experiences involve small group learning which includes four basic elements: "positive interdependence, individual accountability, collaborative skills, and group processing" (D. W. Johnson & R. T. Johnson, 1986, p. 555). These are defined as follows:

1. "Positive Interdependence" - "The perception that one is linked with others in a way that one cannot succeed unless the others do (and vice versa)" (D. W. Johnson & R. T. Johnson, 1986, p. 555);
2. "Individual Accountability" -

> When the performance of each individual student is assessed so that the group knows who needs more assistance in completing the assignment and so that each member perceives that he or she must fulfill responsibilities in order for him or her and the group to be successful, individual accountability is being stressed (D. W. Johnson & R. T. Johnson, 1986, p. 555);

3. "Collaborative Skills" - Collaborative skills are essential if groups are to function effectively. "Needed collaborative skills include leadership, decision-making, trust-building, communication, and conflict-management skills" (D. W. Johnson & R. T. Johnson, 1986, p. 555); and,
4. "Group Processing" - Cooperative learning groups require time to discuss how well they are achieving their objectives and maintaining positive working relationships (D. W. Johnson & R. T. Johnson, 1986).

> Some of the key ingredients to successful processing are allowing sufficient time for it to take place, making feedback specific, maintaining student involvement in processing, reminding students to use their collaborative skills while they process, and ensuring that clear expectations as to the purpose of processing have been communicated (D. W. Johnson & R. Johnson, 1984b, cited in D. W. Johnson & R. T. Johnson, 1986, p. 555).

Limitations/Delimitations of the Study

Interactions between people are complex, involving multiple processing demands, therefore there are a number of methodological limitations and delimitations to the outcome of this study.

1. The experimental context was a "closed" situation in which the intellectually disabled student was paired with a single learning partner (rather than an "open" situation in which there are several alternative learning partners). As suggested by neo-Vygotskian literature, the skills individuals demonstrate depend on the activity in which they exhibit them (Anderson-Levitt, 1985). Therefore, the verbal conflict resolution skills demonstrated by the students may be particular to the context that

was chosen for the elicitation of verbal disagreements between intellectually disabled students and their peers. One must be cautious in generalizing the findings to other two-party interactions and to triadic/multi-party conflict scenarios. The results of the current study also do not apply to students with other ability levels.

2. This examination of conflict exchanges during a problem-solving task is essentially the study of "serious" (as opposed to "playful") conflict. The distinction between "serious" and "nonserious" conflict was advanced by Garvey and Shantz (1992) who indicated there is evidence that serious disagreements can differ from playful ones.

3. The study was designed exclusively to examine verbal disagreements. Enactive disagreements and the relationship between enactive and verbal disagreements were not the focus of this investigation. Further research is required to explore the nature of enactive disagreements and to compare and contrast disagreements that arise from verbal stimuli versus those arising from nonverbal behaviors.

4. The sequencing of behaviors between the partners of a verbal disagreement may be salient to advancing our understanding of verbal disagreements. Sequential analysis was not employed in the current investigation. Sequential analysis procedures (Bakeman & Gottman, 1986) explore series or chains of behavior

whereas the analysis of the data in this study looked at isolated components of verbal disagreements.

5. This was an investigation concerning overt manifestations of verbal disputes. The data used in analysis was exclusively verbal. Participants' goals and motives within the interaction were not a focus of the study. Covert processes such as the attributional style of the participants and other psychological attributes of the subjects (for example, the need to be accurate versus the need to obtain peer approval) were not considered (Aboud, 1981).

6. The study examined discourse-specific roles during disagreements (opposer - opposee) (Eisenberg & Garvey, 1981; Eisenberg, 1992). The research did not examine them within their social roles (personal/activity-based). Conversational resources may be deployed differently depending on settings/social roles/cultural factors (Garvey & C. U. Shantz, 1992).

7. This study was not designed to investigate other aspects of the students' interactions during their participation in the learning task. It would be possible, and perhaps desirable, to evaluate other components of the overall interactions between mildly intellectually disabled learners and their normal-progress peers. This could be done as a follow-up to the current study, by revisiting the data using coding schemes to score overall interaction between the learners.

8. This study aimed to describe the verbal disagreements of intellectually disabled students interacting with their peers who exhibit normal academic progress. The study was not designed to describe or define other aspects of the learning engagement. Cognitive processes which are thought to be triggered by disagreement cannot be observed directly (Lindow, Wilkinson, & Peterson, 1985).

9. The language tests selected for the study examine pragmatic language performance and general language performance. Phonology, proxemics, motor speech, fluency, and resonance characteristics of the students' communicative behavior were not assessed.

Chapter II

REVIEW OF THE LITERATURE

The following discussion lays the foundation for the investigation by reviewing relevant literature from both theoretical and empirical vantage points. The review begins by: (a) outlining the importance of social interaction for learning; (b) considering cooperative learning as a current educational practice; and (c) exploring the application of cooperative learning practices in the education of students with intellectual disabilities. Subsequently, the rationale for studying conflict in relationship to talk as integral to the study of verbal conflict is presented. This, in turn, leads to a comprehensive review of the empirical literature regarding: (a) the communicative competence of individuals with mild intellectual disability; and (b) the conflict resolution ability of individuals with mild mental retardation which highlights the lack of study in this area.

Social Interaction and the Development of Logic

Peer relationships figure prominently in theoretical formulations concerning the social origins of thought. The view that social interaction is an important context for intellectual development has been prevalent in the literature for some time (C. R. Cooper, Ayers-Lopez, & Marquis, 1982; Doise & Mackie, 1981; Light, 1983; Mugny & Doise, 1978; Neilson & Dockrell, 1982). Evidence supporting the importance of conflict for learning is accumulating (Bearison et al., 1986; Forman & Kraker, 1985).

The work of Piaget and Vygotsky is notable in advancing the notion that conflict is an impetus for intellectual development (Forman & Kraker, 1985). According to Piaget

(1932), peer interaction fosters cognitive conflict/disequilibrium. Piaget stressed the importance of peer interaction for this process to occur, as peers are likely to challenge one another. Interactions resulting in cognitive conflict can influence development by creating the disequilibrium necessary for internal restructuring of thought. Vygotsky (1978) theorized that social interaction with adults allows the child to solve novel problems with assistance before solving them independently. More capable peers also may provide this assistance that consists of scaffolding and modeling strategic problem-solving processes leading to metacognitive awareness. In the process of attempting to solve tasks through peer collaboration, strategies are selected and combined in new ways. This may involve negotiating conflicting ideas regarding which strategies to adopt for solving a learning problem. Hence, peer assistance consists of providing not only information, but also strategic knowledge about the learning task. This first emerges interpersonally (on the interpsychic plane), and involves the use of language as a shared social system important for the development of thought (Bearison et al., 1986). Then as the learner advances, strategic information is internalized (incorporated on the intrapsychic plane), later resulting in independent solutions to similar tasks.

This discussion supports the notion that the negotiation of conflicting points of view is salient to the educational process. This may be particularly so for students with intellectual disabilities. But there is overwhelming evidence that these students have difficulty in social interactions (Zetlin & Murtaugh, 1988) which may influence their participation in cooperative learning activities. During collaborative problem-solving, participants in the learning task create their own social or cognitive organizing principles. Hence, the question of how students with intellectual disabilities negotiate and collaborate

with other learners in order to establish strategies for approaching learning tasks requires attention. Understanding these students' strengths and limitations in the domain of conflict resolution is essential, especially during learning engagements. This is an important and relevant consideration in the light of evidence that one particular problem which individuals with intellectual disabilities exhibit is difficulty in resolving conflicts (Hughes & Lyles, 1994; Sherman et al., 1992).

Cooperative Learning and Students with Disabilities

Intellectually disabled students' difficulties in conflict resolution in the classroom setting may have widespread implications for their educational attainment and social adjustment, in particular their participation in cooperative learning settings. Educators have been advocating the use of cooperative learning as an effective technique for integrating students with intellectual disabilities (D. W. Johnson & R. T. Johnson, 1986; R. T. Johnson & D. W. Johnson, 1983; Putnam, Rynders, R. T. Johnson, & D. W. Johnson, 1989). Although very few investigations have examined the differential effects of cooperative learning on the academic attainment of students with mild mental retardation, a positive effect on the achievement of handicapped students in general has been reported (D. W. Johnson & R. T. Johnson, 1985). However, the favorable influences of cooperative learning upon the social and interpersonal development of disabled students is well-documented in the literature (D. W. Johnson & R. T. Johnson, 1984; R. T. Johnson & D. W. Johnson, 1981, 1982, 1983; D. W. Johnson, R. T. Johnson & Maruyama, 1983; D. W. Johnson, R. T. Johnson, Warring, & Maruyama, 1986). "Cooperative learning strategies improve social relationships between students with mild

disabilities and their nondisabled agemates" (Mainzer, Mainzer, Slavin, & Lowry, 1993, p. 46).

Conflict and Current Educational Practice

Social interaction is at the heart of the cooperative learning approach, a prominent educational practice today. D. W. Johnson and R. T. Johnson (1991), who are leading proponents of cooperative learning, assert emphatically that we know more about the efficacy of cooperative learning than almost any other facet of education. The primacy of cooperative learning as an instructional methodology is not surprising given that, in comparison to other approaches, cooperative learning "has the most widespread and powerful effects on instructional outcomes" (D. W. Johnson & R. T. Johnson, 1991, p.22). Cooperative learning's positive influence on educational outcomes should result in educators embracing and adopting the approach as an instructional technique – "within instructional situations cooperative learning must dominate" (p. 22).

Despite the importance of cooperation, the vital role that interpersonal conflict assumes in well-functioning cooperative engagements must not be disregarded (D. W. Johnson, 1981b). Leaders in the cooperative learning movement acknowledge that "involved participation in cooperative groups will inevitably produce conflicts" (D. W. Johnson & R. T. Johnson, 1991, p. 162). Incompatible ideas, opinions, and information among learners produce controversy which the participants seek to resolve (Sharan, 1980; D. W. Johnson, 1981a; D. W. Johnson & R. T. Johnson, 1979). "Cooperation...stimulates students to externalize their thoughts, expectations, and arguments" (Nijhof & Kommers, 1985, p.128). In fact, researchers (D. W. Johnson, R. T. Johnson, Roy, & Zaidman,

1985) have demonstrated that disagreeing with each other's conclusions is one basic dimension of oral interation within cooperative learning groups. Furthermore, controversy can influence achievement. Smith, D. W. Johnson, and R. T. Johnson (1981) reported that controversy promoted higher achievement than either concurrence seeking or individualistic study. "Controversy enhances individual achievement, higher-level reasoning, and long-term retention, as well as the quality of relationships among group members" (D. W. Johnson & R. T. Johnson, 1991, p. 162).

Therefore, the ability to negotiate conflict is central to the efficient and effective use of cooperative learning as an educational methodology with students. This is particularly so for learners with mild intellectual disabilities who have been integrated into the mainstream environment. A repertoire of strategies and skills for conflict resolution must be available to them in order to advance and enhance their cognitive growth, not to mention their need for participation in classroom activities. Poor conflict resolution skills may preclude the type of participation important for making developmental gains in learning engagements. The key may be in how to negotiate conflicts and this, of necessity, raises the question of the role that language plays in the negotiation process.

The Rationale for Studying Conflict in Relationship to Talk

In virtually every major theory of human development, conflict figures prominently (C. U. Shantz, 1987). Its centrality prompts consideration of the relationship between conflict resolution and other domains of development, especially to language. Scholars have asserted that language is one cognitive process integral to higher psychological activity (Garton, 1983; 1984; cited in Garton & Renshaw, 1988). Language is the tool by

which conflicts are negotiated - "conflict is a social activity, created and conducted primarily by means of talking" (Garvey & C. U. Shantz, 1992, p. 93). Garton and Renshaw (1988) articulated their view by stating:

> The processes required for the resolution of disagreements such as the need to communicate accurately and efficiently and to take account of the other person during the interaction are extremely important for cognitive development. Such higher order processing clearly enables more flexible thinking and problem-solving (p. 283).

Exploration of the linkage between communication and conflict resolution has been advocated by researchers more than a decade ago. For example, Fahs (1981) echoed the need for integrated research on the combined processes of conflict and communication. He stated "scholars have suggested that ... the key to establishing methods of controlling and managing conflict is the communication process" (pp. 38-39). In the following discussion, logical and empirical reasons for studying conflict in relationship to communicative behavior are examined.

First, conflicts are conversational phenomena employing the linguistic and pragmatic resources of interactive talk (O'Keefe & Benoit, 1982). "Conflict is a social activity, created and conducted primarily by means of talking" (Garvey & C. U. Shantz, 1992, p. 93). Bruner (1986) stated that "getting things done with words is the essence of negotiation" (p. 19), placing emphasis on mastery of the pragmatics of language. Many naturalistic studies of conflict have focused on *conflict talk.* These studies explored the talk used in conflict episodes as skilled and differentiated communicative behavior (Eisenberg, 1992; Eisenberg & Garvey, 1981; Garton & Renshaw, 1988; Garvey & C. U. Shantz, 1992; Lindow et al., 1985; Renshaw & Garton, 1986).

Stocking, Arezzo, and Leavitt (1980, cited in Stainback & Stainback, 1987) generated a list of behaviors required for handling conflicts. Most of the behaviors they itemized involve language facility. These behaviors included: expressing personal needs; listening to others' expressed rights; offering nonaggressive solutions; providing rationales for proposed alternatives; standing up against aggressive or unreasonable demands; accepting reasonable disagreement; and, compromising on solutions. Clearly, the behaviors for resolving conflicts require some degree of communicative sophistication.

A second rationale for studying conflict in relationship to talk is that recent insightful investigations of "conflict talk" have been completed with normal children. Our understanding of adversative episodes and social competence has been enhanced by empirical investigations of the patterns of verbal conflict behavior demonstrated by normally developing children. Garvey and C. U. Shantz (1992), for example, reviewed the evidence on the variations in verbal conflict behavior in children's everyday disputes. In addition, Eisenberg (1992) identified instances of interpersonal opposition and coded 13 elements specific to the communicative aspect of conflict (including both verbal and paralinguistic elements). For example, the type of speech acts opposed included "requests for action", "requests for permission", "statements of intent", and "statements of fact". Furthermore, the topic of the conflict was also identified. Coding for the type of initial opposition used categories such as: "simple no", "indirect no", "justification", "alternative", "delay/distraction", and "question/ challenge".

The importance of verbal language to conflict extends downward to very young ages. Even in 19 to 25 month old normal children, the relevance of communication to conflict resolution is highly salient (Hay & Ross, 1982). For example, at this early age (an

age when language is just emerging), verbal remarks were made in 53 per cent of the conflicts. Hay and Ross noted that "more than half the moves included communication, and, indeed, the children began most struggles by treating their peers as people who might respond to words" (p. 111). In addition, M. Benson (1996) reported that the narrative skill of four- and five-year olds predicted the inclusion of conflict in a story. This offers further evidence of a linkage between language and conflict.

Thirdly, recent work with disabled populations has underscored the salience of a relationship between language and conflict. For example, Levine, Van Horn, and Curtis (1993) administered the Neurobehavioral Rating Scale (Levin, High, Goethe, Sisson, et al., 1987) to 40 adults with closed head injury. Multiple regression analyses demonstrated that a language-memory factor was a reliable predictor of scores on Selman's (1986) "interpersonal negotiation strategies" (INS) evaluation (a score on eight brief stories depicting conflict situations). A direct relationship between the language scores and the interpersonal negotiation strategies scores was noted. This finding raises the question of whether a similar relationship between language and conflict exists for other conditions, such as intellectual disability.

To sum up, the study of language and conflict is advocated because of three different reasons. First, conflict is defined as a conversational enterprise. Hence, this suggests that there may be linkages between linguistic and pragmatic skills and conflict resolution. Secondly, in recent years, language skills have figured prominently in the investigation of the conflict episodes of normal individuals. Extending investigations in this area to people with disabilities would advance our understanding of the relationship between talk and conflict. Thirdly, recent empirical research with a head injured

population has related performance in the language domain to conflict resolution. Since language was related to conflict resolution for this disability, perhaps this is true for other disabled populations as well.

Hence, consideration of the communicative skills evidenced by individuals with intellectual disabilities is important in any attempt to study the verbal disagreements of adolescents with mild intellectual disabilities. Therefore, research into the communicative behavior of individuals with intellectual disabilities is discussed in the following section. Language deficits may impede the efficiency and effectiveness of intellectually disabled students' social interactions, including the ability to manage verbal disagreements.

Communicative Competence of Individuals with Mild Intellectual Disability

As language is the tool by which conflicts are negotiated, individuals with impaired linguistic and socio-communicative competence may exhibit difficulty in conflict negotiation. The empirical literature documents an extensive array of communicative deficits in individuals with mild to moderate intellectual disabilities.

Linguistic impairments are numerous. These include: phonological disorders and reduced speech intelligibility (Chapman & Nation, 1981; Swift & Rosin, 1990); slower lexical development (Barrett & Diniz, 1989); receptive language deficits (Abbeduto, Furman, & Davies, 1989; Abbeduto & Nuccio, 1991; and expressive language difficulties including impaired syntax (Sabsay & Kernan, 1993; Snow & Pan, 1993). Although studies of the language of persons with intellectual disabilities have furnished extensive evidence of deficits in syntax, vocabulary, morphology, and articulation, few researchers have investigated pragmatics (Sabsay & Platt, 1985a). However, conflicts occur within

interactive contexts. Therefore socio-communicative competence (pragmatics) may be presumed to be critical in the successful negotiation of conflicts. Social communicative language is deemed important for clarifying intent, developing shared meaning, and negotiating resolutions to conflicts. A search of the ERIC (1982-3/95), International ERIC (1976-3/95), and PsycLIT (1/74-6/95) databases was conducted to determine the availability of articles exploring these dimensions, *pragmatics* and *mild mental retardation*. This process identified no studies specifically addressing the socio-communicative language of adolescents with mild intellectual disabilities.

As mentioned, the literature search did not reveal studies conducted with adolescents. However, some relevant research with other age groups provides insight into the pragmatic language abilities of individuals with mild to moderate intellectual disabilities. First, the research into the pragmatic abilities of adults with intellectual disabilities is summarized, followed by investigations exploring the pragmatic language of children with intellectual disabilities.

Oetting and Rice (1991) examined the influence of social context on the pragmatic skills of 16 adults with mild-moderate intellectual disabilities. These researchers suggested that there may be contextual factors that influence the ability to follow conversational topics. The adult subjects in their study were successful in judging topic maintenance in a simplified, but not in a complex context. Intuitive logic suggests that topic maintenance ability is important for interpersonal problem-solving, especially the negotiation of conflicts. Although Oetting and Rice's (1991) study was conducted with an adult population, their research has relevance to adolescents with mild intellectual disabilities.

When pragmatic language deficits are apparent in adulthood, deficits can be presumed to exist at earlier stages of development (for example, adolescence).

Maintaining the topic of conversation is another pragmatic language behavior that has been studied. The establishment and maintenance of a conversational topic may present particular difficulties to individuals with intellectual disabilities. Bedrosian (1993) stated that topic maintenance skills are important for fostering development and the growth of interpersonal relations, for exchanging ideas and expressing feelings, and for expressing an interest in one's conversational partners. Abbeduto and Rosenberg (1980) noted that adults with intellectual disabilities did little to develop the topic to help the conversation progress. Difficulties in this area may impede the conflict negotiation process, perhaps by resulting in aborted attempts at completing the negotiation or by submission to the views or wishes of the conversational partner.

Evidence lending support to the notion that pragmatic impairments may be characteristic of students with mild intellectual disabilities also has arisen from studies conducted early in development. One such study contrasted the pragmatic skill development of two mildly intellectually disabled and two nonhandicapped kindergarten children, interacting during classroom activities (C. S. Cooper, 1986). A checklist recording six categories of speech acts – "commenting", "answering", "affirming", "denying", "directive", and "other" was used to code the conversational behavior of these students. While nonhandicapped children employed a greater proportion of speech acts with a controlling/directing function, the mildly intellectually disabled children typically were more reactive, exhibiting high rates of "affirming", "denying", and "answering". This finding suggests the possibility that students with intellectual disabilities may initiate

conflicts less frequently than their normal peers. Furthermore, students with intellectual disabilities may be more reactive and less proactive in conflict engagements. C. S. Cooper noted not only that different types of directives were used by normal and handicapped children, but that handicapped children relied on short, repetitive imperatives while the nonhandicapped generated questions. The ability to generate questions may be critical to framing challenges indirectly in instances of conflict negotiation. Handicapped children were more comfortable speaking in situations that gave structure to their conversation, while the nonhandicapped children were at ease talking in loosely structured activities. These findings may be indicative of the fundamental problems facing intellectually challenged children. The results do suggest that collaborative discovery-based learning interactions may be more communicatively challenging to children with mild intellectual disabilities than more structured learning interactions. Furthermore, if difficulty using a variety of pragmatic language functions persists into the later school years, lack of pragmatic language facility may restrict interactions essential to the negotiation of conflicts.

Abbeduto (1991) reviewed the research into the turn-taking behavior of children with intellectual disabilities. These studies have generally been conducted using parent-child interactions. Therefore, the applicability of the findings to other interactions is speculative. Findings indicated that turn-taking errors (interruptions, simultaneous starts) occur infrequently (Abbeduto, 1991; Davis & Oliver, 1980; Davis, Stroud, & Green, 1991; Tannock, 1988). Abbeduto (1991) cautioned that turn-taking behavior in parent-child interactions (where the parent works hard to maintain interaction) may not reflect

turn-taking skills in peer interactions. There are no available studies of turn-taking behavior between children with intellectual disabilities and their peers (Abbeduto, 1991).

Repairs of conversational breakdowns are important to the maintenance of social interaction. There is documented evidence that children with intellectual disabilities exhibit less success using conversational repair devices (Abbeduto, 1991; Abbeduto et al., 1991; Longhurst & Berry, 1975; Rueda & Chan, 1980; Scudder & Tremain, 1992). The ability to repair conversational breakdown is salient and essential for participating in learning engagements. Difficulties repairing conversations may shorten disagreements because the intellectually disabled student may lack the skills to continue engaging in the conflict episode.

Taken collectively, it seems logical that the general language deficits and pragmatic language differences evident in individuals with mild intellectual disabilities could preclude successful conflict resolution. Conflicts involve differences of opinion. The ability to clearly articulate one's position in adversative episodes requires linguistic competence. Furthermore, to understand an opponent's position requires comprehension of verbal and nonverbal communication events. Topic maintenance requires shared knowledge, which suggests that lexical development is implicated in conflictive engagements. The ability to provide explanations may be an important skill for avoiding unnecessary conflicts and for resolving differences. Conflict exchanges that offer a reason or justification are generally shorter than ones in which an explanation is not offered (Eisenberg & Garvey, 1981). To sum up, general language ability (linguistic competence) and pragmatic competence (socio-communicative language) may be important for advancing our understanding of conflict resolution in adolescent students with mild intellectual disabilities.

Clearly, impairments of language and communication may limit the social participation of adolescents with mild intellectual disabilities. This has implications for their participation in cooperative learning activities within the classroom. The opportunity to benefit from the sorts of interactions that optimize their learning may be limited. Because the communicative skills important for meaningful social engagements are impaired, it follows that learning engagements are restricted both in scope and in quality.

Research into the language behavior of children with intellectual disabilities lagged behind investigations aimed at chronicling the language development of normal children. Studies on normal children's language development (for example, Brown, 1973), were followed only later by investigations specifically aimed at understanding the language development of individuals with intellectual disabilities. These studies have just been described, and further work still is required.

A similar situation has occurred with research efforts in the area of conflict resolution. The conflict resolution of normally developing peers has been studied in some depth (Berkowitz & Gibbs, 1985; B. K. Bryant, 1992; Eder, 1990; Eisenberg & Garvey, 1981; Garton & Renshaw, 1988; Goodwin & Goodwin, 1987; Hay, 1984; Hay & Ross, 1982; Selman, 1980; C. U. Shantz, 1987; C. U. Shantz & Hartup, 1992; C. U. Shantz & D. W. Shantz, 1985). In contrast, efforts directed towards understanding the conflict resolution of individuals with intellectual impairments are limited (Bradley & Meredith, 1991; Hewitt et al., 1993; Hughes & Lyles, 1994; Sherman et al., 1992). In the next section, the research into intellectually disabled individuals' conflict is reviewed.

Mild Intellectual Disabilities and Conflict

Van Acker (1993) asserted that teachers, especially those in special education, must develop their skills in order to provide students with occasions to develop and practise prosocial conflict resolution strategies. Despite this call, little is known concerning intellectually disabled students' conflict resolution. Conflict is, however, a problem for individuals with intellectual disabilities.

Graziano and Bercow (1985, cited in Hewitt, Duchan, & Segal, 1993) reported that staff members of community residences for the mentally retarded perceive arguments as a significant problem. Another report employed content analysis to establish categories of stress experienced by adolescents with mild learning handicaps (Wayment & Zetlin, 1989). Of the four categories of stress that arose from the data, one was "direct conflict". In addition, difficulties with conflict resolution have been documented in sheltered workshops. Anderson-Levitt (1985), using an ethnographic research methodology, documented the issues arising during 13 weeks of group meetings at a sheltered workshop for mentally retarded adults. Over 70 percent of the problems involved various kinds of peer conflicts. Conflicts with authority figures also arose with frequency. Anderson-Levitt noted that clients: "may fail on many occasions to fill in important background information for their listeners"; and, "vary in the degree to which they succeed at winning others to their point of view through argumentation" (p.72).

Other studies and reports which will be reviewed in the following discussion support the view that intellectually disabled individuals experience conflicts and demonstrate developmental lags in their conceptualizations about conflict. A number of

researchers in the field of intellectual disabilities have explored conflict resolution from the orientation of social cognition and interpersonal understanding.

Affleck (1975a) examined the relationship between role-taking ability and interpersonal conflict resolution in 16 young adult males with mild and moderate mental retardation. A *Role-Playing Assessment Technique* (Seeley, 1971) was used. Role plays were videotaped between an intellectually disabled adult and a normal adult enacting a script. The subjects' responses in the social conflict role play episodes were rated for conflict conceptualization, recognition of the partners' feelings and intents, and consequences of the solution. Performance related to role-taking ability was measured by the subjects' responses to retelling a story. Story retelling was carried out from the standpoint of each of the characters in the cast. For young intellectually disabled adults, the findings supported an association between role-taking ability and interpersonal conflict resolution, independent of the influence of general intelligence.

Bradley and Meredith (1991) evaluated qualitative dimensions of social perspective taking ability among 8-16 year old students classified as educable mentally retarded (EMR). Social perspective taking in both individual and friendship domains was explored using a reflective interview entitled *Assessing Interpersonal Understanding* (Selman, Jacquette, & Bruss-Saunders, 1979). Although the EMR students exhibited a developmental progression in their social perspective-taking abilities, developmental delay was apparent. Interpersonal understanding within the *individuals domain* advanced steadily with age. However, the same amount of progress was not evidenced in the global scores for the *friendship domain* (the global score was derived from levels of understanding for formation, maintenance, and conflict resolution within friendships).

Specific scores for conflict resolution were not specified in the research summary. However, since "conflict resolution" contributes to the global score for the *friendship domain*, a suspected lag in the conflict resolution aspect of friendship understanding can be entertained.

Hughes and Lyles' (1994) findings lend support for this possibility. These investigators examined the conceptions of conflict resolution for selected mainstreamed students with intellectual disabilities. They used their *Student Interview About Friendship*, an adaptation of Selman et al.'s (1979) *Assessing Interpersonal Understanding* interview procedure, and reported the following outcome. The students with intellectual disabilities demonstrated conflict resolution levels which fell two levels below that expected for their chronological age. Hence, studies emanating from social cognitive theory have indicated that difficulty with conflict is a liability for intellectually disabled individuals.

Studies exploring the behavior that individuals with intellectual disabilities exhibit during conflict negotiation are rare. One investigation evaluated the ability of intellectually disabled adults (ranging from mild to severe mental retardation) to perform during role plays. Two of these role plays involved negotiation of a conflict situation - asking a coworker to finish a job and requesting a roommate to wash the dishes (Sherman et al., 1992). Performances were scored using behavioral checklists. Participants with intellectual disabilities fared significantly more poorly on negotiation than their intellectually normal counterparts. These investigators acknowledged that the role play procedure may not predict performance under more natural circumstances. However, the role play procedure does offer information about whether the intellectually disabled individual has conflict negotiation skills in her/his repertoire. Skills deemed to be

important for conflict resolution were identified for the behavioral checklist. The important verbal skills were: giving a reason for the request; proposing a compromise solution; maintaining a normal (positive, nonaccusing) voice tone; and, not interrupting when the other person was talking.

One study documents the nature of multi-party verbal conflicts arising in a group home for the intellectually disabled. Hewitt et al. (1993) studied the structure and function of verbal conflicts of adult intellectually disabled residents of a group home. Verbal conflict episodes extending for at least four conversational turns were identified and analyzed for topic, number of participants, number of turns, patterns of participation, and whether or not conflicts were resolved. Residents failed to provide reasons to support their positions and did not frame their challenges indirectly (use mitigating devices). Subjects typically stated a position and reasserted it when it was opposed. No conflict was resolved by a resident offering a convincing reason. Whether performance would have been better with a normal peer is not known - the study primarily explored interactions between intellectually disabled residents. The subjects participating in the investigation had levels of functioning ranging from mild to severe mental retardation. The majority of the subjects demonstrated a speech or language disorder. Difficulties with verbal conflict resolution among adults with intellectual disabilities suggests that these same difficulties were present during adolescence.

There are research reports indicating that intellectually disabled students and adults demonstrate difficulties with conflict resolution. Despite this, there are no empirical studies of the verbal conflicts of intellectually disabled children in interactions with normal peers. C. U. Shantz (1987) stressed the importance of identifying the components of a

conflict for developing a better understanding of conflict. A. Sheldon (1992) asserted that examining utterances in discoursal contexts is essential for advancing our understanding of conflict talk. Language analyses are essential to capture the complexity of linguistic and interaction skills deployed in the resolution of verbal disagreements. Therefore, the primary goal of the current investigation is to examine *verbal disagreements* arising between intellectually disabled adolescents and their normal-progress peers.

Chapter III

METHOD

Methodological topics discussed in this chapter include: research design, selection of the sample, subjects, materials, equipment, data collection procedures, scoring procedures, and statistical analysis of the data.

Research Design

This was a descriptive, exploratory study examining the features of spontaneously produced verbal conflicts arising between mildly intellectually disabled and normal-progress adolescents during an educational problem-solving task (a quasi-naturalistic setting). Understanding how intellectually disabled students participate in "real world" learning engagements with regular stream students extends our knowledge regarding how the intellectually challenged adolescents function in mainstreamed educational settings. The study also explored language competence and its relation to conflict negotiation. Knowledge regarding language and conflict negotiation ultimately informs instructional practice with these learners.

Using an adaptation of Eisenberg's (1992) discourse analysis scheme for verbal conflicts (see Appendix A), the study examined adolescents' use of language in disagreements within a learning task. It explored disagreements over larger stretches of discourse rather than studying "adjacency pairs" (Sacks, 1972). The examination of longer sequences of events (i.e., discourse) was preferable to identifying adjacency pairs in conversational interaction. The reason for the examination of longer sequences is that

social acts such as disagreements usually extend beyond adjacency pairs, such as "request-response" or "question-answer" (Eisenberg & Garvey, 1981). That is, disagreements, like requests for clarification, are "side sequences" in conversation that require immediate attention if the conversation is to move forward. These adversative episodes "have a fixed beginning and require immediate resolution if the interaction is to proceed" (Eisenberg & Garvey, 1981, p. 150). The opposition causes the ongoing interaction to cease until the resolution allows it to recommence. This usually occurs over a series of utterances. "Once the opposition is stated, the adversative episode begins, any prior goal or task is abandoned and attention is directed to resolving the incompatibility" (p. 151).

The main objective, therefore, of this investigation was to evaluate the nature of verbal disputes that occur when dyads composed of mildly intellectually disabled and normal adolescents engage in a problem-solving task. In accordance with Hay (1984), the current investigation adopted the view of conflict as a dyadic phenomenon. It can be argued that any beginning attempt to understand conflict must take as its starting point the analysis of two-party disagreements. Initial efforts to understand two-party disagreements are foundational for later research aimed at studying disagreements within multi-party cooperative learning groups. D. W. Johnson and R. T. Johnson (1986), proponents of the cooperative learning instructional strategy, however, note that "cooperative learning groups tend to range in size from two to six...when students become more experienced and skillful, they will be able to manage larger groups" (p. 557). By first advancing our understanding of how students with intellectual disabilities disagree in dyadic exchanges, later work can extend the study of conflict to triadic and polyadic contexts.

Selection of the Sample

Permission was obtained to recruit potential participants through the River East School Division and the Winnipeg School Division No. 1 (see Appendix B for permission letters). In the fall of 1995, Special Education Resource Teachers were approached individually by the researcher at each school site. They were offered a brief overview of the purpose and significance of the investigation, the time commitment, and the criteria established for nominating subjects for inclusion in the study. The criteria for intellectually disabled and for normal-progress participants were as follows:

Subjects with mild intellectual disabilities: A convenience sample of available adolescents was targeted. Because there has been variability in terminology (Mainzer et al., 1993) and a move away from the use of categorical labels as defined by the American Association on Mental Retardation (Grossman, 1983), subject selection was based on the following inclusion and exclusion criteria.

Inclusion criteria: Subjects deemed to be appropriate for the study were mainstreamed intellectually disabled students who were functioning at least two years below grade level due to academic deficiencies across core subject areas such as language arts, reading, and mathematics. Students who formerly would have been identified with mild-moderate levels of mental retardation were eligible for the study. Mildly intellectually disabled adolescents whose primary language was English and whose mode of communication was verbal were targeted.

Exclusion criteria: Mildly intellectually disabled adolescents who communicated through alternative means (such as signing or an alternative/augmentative communication

[AAC] system) were ineligible. Furthermore, those who exhibited either a severe speech disorder (e.g., severe stuttering or speech judged to be less than 80% intelligible when the topic of conversation was known) were excluded. Students who had a diagnosed hearing loss or educationally significant visual impairment were excluded. Students who had active psycho-social problems requiring intervention from a psychologist, psychiatrist, or behavior specialist were not eligible to participate.

Mildly intellectually disabled adolescents who met the aforementioned criteria, but who had other disabilities (for example, wheelchair dependent) were eligible to participate. Subjects were nominated for the study by their Special Education Resource Teacher. Twenty-five adolescents with mild intellectual disabilities who were enrolled in integrated educational settings were recruited to take part in the investigation.

Normal-progress peers: These 25 participants were to be adolescents with normal learning (that is, deemed intellectually "normal") and who, in the opinion of their teachers, demonstrated no discernible language or learning disability. That is, these students were ineligible for special education resource services or special needs funding support by Manitoba Education and Training. Each "normal-progress" student was selected randomly from the class roster. (Since one aspect of peer interactions is the extent to which the participants like one another [C. U. Shantz, 1987], random selection of the normal peers was requested). The normal-progress student was paired with a same-sex intellectually disabled classmate to complete the educational problem-solving task (see Item 2 of "Procedure" below). Intellectually normal students who had active psycho-social problems requiring intervention from a psychologist, psychiatrist, or behavior specialist were ineligible to participate in the study.

Once potential participants were identified, their parents received a letter requesting permission for their children to participate. Parental or legal guardian's consent for participation in the study was required of all subjects. The *"Project Description for Parents"*, the *"Letter of Agreement"*, and the *"Disposition of Audio and Videotapes"* that the parents received are appended (see Appendix C.) Parental consent was received for 25 intellectually disabled and 25 normal-progress students.

Subjects

A total of 25 dyads enrolled for the study. There were 25 intellectually disabled students and 25 normal-progress students. Each intellectually disabled student was paired with a normal-progress peer from the same classroom. The mean age of the intellectually disabled students at the time of the learning activity was 169.64 months (14 years 1 month; standard deviation = 11.39 months). The mean age of the normal-progress students was 159.32 months (13 years 3 months; standard deviation = 8.41 months). Thirteen of the 25 dyads were comprised of female students. The mean age of the intellectually disabled female participants was 171.85 months (14 years 4 months; standard deviation = 13.01 months); the mean age of their normal-progress counterparts was 160.08 months (13 years 4 months; standard deviation = 9.13 months). Twelve of the 25 dyads were comprised of male students. The mean age of the intellectually disabled male participants was 167.25 months (13 years 11 months; standard deviation = 9.48 months); the mean age of their normal-progress counterparts was 158.50 months (13 years 3 months; standard deviation = 7.88 months).

Students came from Grades 7, 8, and 9. The intellectually disabled students and the normal-progress students were each considered as a homogeneous group of students at the junior high level. Eleven (44%) of the 25 intellectually disabled students came from Grade 7 classrooms, 12 (48%) from Grade 8 classrooms, and two (8%) from Grade 9 classrooms. For the normal-progress students, 12 (48%) came from Grade 7 classrooms, 11 (44%) from Grade 8 classrooms, and two (8%) from Grade 9 classrooms.

One of the normal-progress students who was nominated for the study moved out of the city before completing the language tests. This participant was replaced with another normal-progress student who completed all language tests and the learning activity.

Although the students' primary language was English and all students were fluent speakers, subjects came from areas of the city where there is an ethnic mix. Children were judged, in general, to be from middle and lower-middle class families.

The intellectually disabled group were enrolled in classrooms with normal-progress students, but pursuing programs with special education supports to augment their learning. Specific information about their I.Q. or educational attainment was not available to the researcher.

Materials

Test materials for the language assessment included: (a) the Test of Pragmatic Language (TOPL), (Phelps-Terasaki & Phelps-Gunn, 1992; and (b) the Test of Adolescent and Adult Language (3rd ed.) (TOAL-3) (Hammill et al., 1994). The Fort

Walsh (CLASS, 1987) software program provided the context for the educational problem-solving task.

The Pragmatic Language Measure. The Test of Pragmatic Language (TOPL) (Phelps-Terasaki & Phelps-Gunn, 1992) is a research tool for the study of pragmatic (social-communicative) language. It is based on a comprehensive three dimensional model of pragmatics. It assesses many features of social-communicative competence in receptive and expressive modes. This measure is intended not only to identify students who fall below their peers in pragmatic language skills, but also to determine the kinds of pragmatic language strengths and weaknesses that individual students possess.

Normative data are available. The Test of Pragmatic Language (TOPL) (Phelps-Terasaki & Phelps-Gunn, 1992) was standardized on 1016 children representing 24 states and one Canadian province. A normative sample representing the national population was used, stratified along key demographic variables as defined in the examiner's manual. Psychometric data on the TOPL's internal consistency, interscorer reliability, and standard error of measurement are reported. Because of the psychometric strengths of the Test of Pragmatic Language, it was selected as the primary measure of pragmatic language.

The Measure of General Language Ability. The Test of Adolescent and Adult Language (3rd ed.) (TOAL-3) (Hammill et al., 1994) was selected as the measure of general language ability. This test, now in its third edition, was designed to identify adolescents whose scores are significantly below those of their peers and as a research tool. This tool reflects a three-dimensional model, evaluating *semantic* and *syntactic*

aspects of language in *spoken* and *written* form, both *receptively* and *expressively*. Hence, it is a test of adolescents' general language ability.

Earlier versions of the Test of Adolescent and Adult Language have been reviewed widely (Edwards, 1989; Shapiro, 1989), receiving favorable ratings for their norms and internal consistency reliability. The third edition, TOAL-3 has been standardized on a sample of 3,056 individuals from 26 states. Its strong psychometric characteristics (reliability and validity) are reported in the examiner's manual. Stability reliability has been strengthened over previous editions of this test. Criterion-related validity studies have augmented earlier studies. The TOAL-3 also has been improved over the TOAL-2 in that a confirmatory factor analysis strengthened the construct validity of TOAL-3.

Therefore, the Test of Adolescent and Adult Language (3rd ed.) (TOAL-3) (Hammill et al., 1994) was selected as the general language ability measure, based on its psychometric properties and because of its three dimensional model of language. It is a comprehensive measure of adolescents' general language ability. As the TOAL-3 does not provide a measure of pragmatic language ability, the Test of Pragmatic Language (Phelps-Terasaki & Phelps-Gunn, 1992) was chosen to furnish information regarding subjects' pragmatic language performance.

The Educational Software. Fort Walsh (CLASS, 1987), a computer activity described by the developers as suitable for students in grade 5 to 11, was selected to serve as the context for the learning task. This educational software program, a social studies exercise, requires students to make decisions as they progress through the program. It was chosen because of its broad applicability to a range of student ability levels coupled

with the potential for prompting discussion between learners. The Fort Walsh learning activity also was chosen to provide the participants in each dyad with a common context for discussion. No reviews of the Fort Walsh software were available in the ERIC (1987 - March 1995) database or in the Canadian Education Index (1987 - December 1995).

The Fort Walsh (CLASS, 1987) program has printed information that the students are required to read aloud from the computer screen. Therefore, the SMOG readability formula by McLaughlin (1969) was used to calculate the reading level of this printed information. Using this formula, the readability level of the Fort Walsh (CLASS, 1987) learning activity was determined to be Grade 8.

Equipment

A camcorder (Sharp Viewcam VL-E37C) and a tape recorder (Marantz PMD 221) were used to record the testing and activity sessions. An Apple IIc computer was used to run the educational software.

Procedure

All students participated first in language testing and then in a social studies activity as described below.

1. *Language Assessment.* Participants completed a formal language assessment consisting of two language tests: (a) the Test of Pragmatic Language (TOPL) (Phelps-Terasaki & Phelps-Gunn, 1992); and (b) the Test of Adolescent and Adult Language (3rd ed.) (TOAL-3) (Hammill et al., 1994). All students were administered the TOPL first, followed by administration of the TOAL-3. This was accomplished over a period of several sessions. Individual (as opposed to group) test administration was

completed. The subjects entered the examining room, were introduced to the testing procedures, and reminded that their participation in the study was voluntary. They were also told that the test results did not contribute to their report card/grades, and would not be reported to their teachers or to their parents. Participants were encouraged to do their best on these tasks.

These language assessment procedures were carried out explicitly to identify the language level of the participants in the study, especially the mildly intellectually disabled students. The administration of these tests was deemed essential for adequate interpretation of conversational data from the educational problem-solving task (see item 2 below).

The Test of Pragmatic Language (TOPL) (Phelps-Terasaki & Phelps-Gunn, 1992) and the Test of Adolescent and Adult Language (3rd ed.) (TOAL-3) (Hammill et al., 1994) were administered by the researcher, a licensed speech-language pathologist. The examiner audiotaped and videotaped the sessions and took notes during testing. Testing was conducted according to instructions contained in the examiner's manuals. Several sessions were required to complete each student's language assessment.

Upon completion of the test administrations, student pairs consisting of an "intellectually disabled" student and a "normal-progress" peer were scheduled to participate in the Fort Walsh (CLASS, 1987) social studies lesson. This procedure is described next.

2. *Educational Activity.* Conversational interactions occurring between adolescents with mild intellectual disabilities and their peers during a problem-solving task

were taped, transcribed, and coded using an adaptation of Eisenberg's (1992) coding system (see Appendix A). An educational computer activity from the social studies curriculum, Fort Walsh (CLASS, 1987), provided the context for this.

For the Fort Walsh (CLASS, 1987) problem-solving task, students working in pairs were introduced to the computer program and instructed to participate in the task (see Appendix D for detailed instructions). This software program (selected from the social studies curriculum) requires students to make numerous decisions from among several possible responses presented on the computer screen. At the outset, the experimenter suggested that the dyad members discuss the options available for each of their answers and generate reasons for their choices. During the activity, the student dyads were re-prompted to discuss the reasons for their answers whenever the intellectually disabled student exhibited three consecutive instances of acquiescence for decisions. The first such prompt consisted of the experimenter reminding the student pair to discuss their reasons before choosing one of the alternatives on the screen. If, after this prompt, the intellectually disabled student continued to defer to the normal-progress peer for three consecutive decisions, a second prompt was delivered. For this second prompt, the experimenter presented a printed page identical to the problem on the computer screen and reminded the student dyad to discuss their reasons for the answers they were considering. (Refer to Appendix D for the first and second prompts delivered.)

In this educational activity, student pairs worked together in a quiet area of their home school, apart from the other students in the regular classroom. The researcher took notes and recorded the conversational interactions between adolescents with mild intellectual disabilities and their normal-progress peers during the Fort Walsh (CLASS,

1987) computer activity. The activities of the research were videotaped and simultaneously audiotaped.

The educational activity required one session of approximately 25 to 35 minutes duration. Although the researcher remained present throughout the learning task, efforts were made to be unobtrusive so that the students could interact with one another in an unrestricted manner. At the conclusion of the learning task, students were thanked for their participation in the study.

Scoring Procedures

1. Language Tests

Upon completion of the language testing, the tests were transcribed and scored by the principal investigator, according to the instructions contained in the examiner's manuals.

2. Educational Activity

Upon completion of the educational activity, the dyads' conversational interactions were transcribed as follows.

Transcription of the taped conversations

The conversational interactions that arose as the students negotiated solutions during the problem-solving task subsequently were transcribed from the audiotapes. The first pass through the audiotapes was completed by a medical transcriptionist who transcribed each audiotape using a Phillips 560 Transcriber. A second pass through a randomly selected sample (20% of the tapes) was conducted by the researcher. Word-by-word mean agreement between the transcriptionist's and the researcher's version of the

transcription for this sample was calculated at 98.87% (standard deviation = 0.28, range = 98.37 to 99%). A high rate of concurrence between the transcriptionist and the principal investigator was attained. Hence, only those segments of the remaining tapes that the transcriptionist had noted as mumbled or of questionable intelligibility were reviewed by the researcher (who had been present when the tapes were initially recorded). The researcher's second pass through these unclear taped segments was accomplished by reviewing the audiotape (and when necessary, the videotape) to determine what words were spoken during these segments of unclear speech. This final transcript prepared by the researcher subsequently was scored using an adaptation of Eisenberg's (1992) coding scheme. This scheme is detailed in Appendix A and will be discussed further under the heading "Coding".

Coding

After the taped conversations of the dyads during the learning task were transcribed, the researcher scanned the transcripts for oppositional moves. Consistent with Eisenberg's (1992) procedure, "all verbal denials, refusals, objections, disagreements, conflicting claims or intentions, and contradictions in response to a partner's utterances" (p. 26-27) were identified. Disagreement episodes included the initial opposing move and all interaction that ensued until one party submitted, a consensus was achieved, the topic changed, or silence occurred for at least 30 seconds (Eisenberg, 1992).

In identifying episodes of conflict on the transcripts, the initial opposed turn and the final nonoppositional conversational turn were numbered 0. The opposition was

represented by 1. Subsequent verbal responses and responses to responses were numbered in sequence, each number indicating a speaker change in the dyadic interaction.

Once conflict episodes were identified on the transcripts, the verbal dissension episodes arising as the intellectually disabled and normal-progress peers participated in the problem-solving task were coded. An adaptation of Eisenberg's (1992) "categories of analysis" was used (see Appendix A). Coders analyzing Eisenberg's "categories for analysis" have demonstrated kappa coefficients of .79 to 1.0 for all categories except topic of conflict (.74) (Eisenberg, 1992). As Eisenberg's coding scheme was employed to analyze disagreements between mothers and their children, in the current study these codes were altered to reflect that the participants were "intellectually disabled" adolescents and their "normal-progress" peers. Changes were also made for the coding of "conflict topic", in order that the coding could be relevant to learning engagements. The adaptation of Eisenberg's coding scheme is detailed in Appendix A. Illustrative examples of the coding of the verbal transcripts are provided in Appendix E.

Statistical Analysis

Because of reports in the literature that intellectually disabled adults "vary in the degree to which they succeed at winning others to their point of view through argumentation" (Anderson-Levitt, 1985, p. 72), a record of the performance of each dyad was retained to facilitate interpretation of the results (see Table F-1 in Appendix F). A detailed record of the performance of each dyad is relevant to an exploratory study of the verbal disagreements arising between intellectually disabled students and a normal-progress peer during a learning engagement.

The Statistical Analysis Software (SAS, 1990) was used to conduct all statistical analyses. Descriptive statistics were generated for all variables that were coded. Language scores and conflict components were tallied. Percentages and frequency distributions, ranges, means, and standard deviations were used to characterize: (a) the subjects' language scores; and (b) the sample of verbal disagreements that arose during the learning task.

Statistical Tests

Wilcoxon Test

The Wilcoxon (1945) Signed Ranks test for matched pairs is the "only valid way to deal with data that are in the form of matched pairs" (Neave & Worthington, 1988, p. 161). This statistical test was used to evaluate hypotheses 3, 5, 6, 7, 9, 10, 11, and 12. For this statistical test, the data consist of observations (X_i, Y_i) taken on subjects that have been paired (Daniel, 1990). In this educational research, there was a "definite pairing between observations in the two samples" (Neave & Worthington, 1988, p. 160), as intellectually disabled and normal-progress subjects were paired for the learning task. When using the Wilcoxon test, the absolute differences are computed for each pair and ranks are assigned to these absolute differences.

This nonparametric statistical test was preferred for a number of reasons. First, the Wilcoxon Signed Ranks test was chosen as it has dyads contribute to the data in equivalent amounts. Secondly, the Wilcoxon test is more powerful than chi-square procedures. When the data are reduced to nominal-type data for analysis, there is a corresponding loss of power (Conover, 1980). Thirdly, this statistical analysis procedure

does not depend on the distribution. Conover (1980) stated that "the probability theory of statistics based on ranks is relatively simple and does not depend on the distribution in many cases" (p. 215). Last, the Asymptotic Relative Efficiency (A.R.E.) of the Wilcoxon test is high, 0.955, compared to its parametric analog (Marascuilo & McSweeney, 1977).

Friedman Test

The Friedman test (Friedman, 1937, 1940) was chosen to evaluate hypothesis 8. This statistical test is employed when it is undesirable to perform the parametric two-way analysis of variance (Daniel, 1990). This nonparametric test uses ranks to avoid the assumption of normality implicit in the analysis of variance. Furthermore, if the Friedman test leads us to reject the null hypothesis, a multiple-comparison procedure is available to use after the Friedman test (Daniel, 1990).

CHAPTER IV

RESULTS

Topics discussed in this chapter include the interrater agreement and the outcome of hypothesis testing.

Reliabilities - Data Coding and Percentage of Interrater Agreement

Transcripts of the learning activity first were examined to identify instances of verbal conflict as defined in the "definition of terms" section. For every conflict that was identified, each of the elements noted in the adaptation of Eisenberg's (1992) coding scheme was determined. The principal investigator coded all of the 25 transcripts. A second coder coded 20% of the transcripts (that is, 5 randomly selected transcripts) and the interrater agreement was calculated. The interobserver agreement was established according to the following formula:

$$\frac{\text{agreements}}{\text{agreements} + \text{disagreements}} \times 100 = \% \text{ of agreement}$$

(J. O. Cooper, 1987). Independence of observations while collecting agreement measures was maintained between the observers.

Agreement between coders was: .86 for identification of episodes as conflicts; .82 for identification of initiator/opposer; .81 for number of conversational turns; .95 for presence of justification by the intellectually disabled student; .87 for presence of justification by the normal-progress student; 1.00 for identification of the last turn in the verbal dispute; .87 for the speech act opposed; 1.00 for dispute topic; .69 for dispute

outcome; .82 for type of initial opposition; .91 for presence of an explicit "no"; .83 for presence of negative affect.

Outcome of Hypothesis Testing

The outcome for each of the proposed hypotheses is discussed in this section, which is divided into two main parts. In the first part, the hypothesis regarding the language skills of adolescents with mild intellectual disabilities is discussed. The second part of the "outcome of hypotheses" section is concerned with those hypotheses pertaining to the conversational interactions that arose during the educational activity. In particular, the verbal disagreements between the "intellectually disabled" students and their "normal-progress" peers are considered.

1. *The Language Skills of Adolescents with Mild Intellectual Disability.*

The following hypothesis was examined:

Mildly intellectually disabled adolescents will exhibit evidence of pragmatic language impairments and impaired linguistic competence as identified by the Test of Pragmatic Language (TOPL) (Phelps-Terasaki & Phelps-Gunn, 1992) and by the Test of Adolescent and Adult Language (3rd ed.) (TOAL-3), (Hammill, et al., 1994), respectively.

Descriptive, qualitative information of the language performance of the intellectually disabled participants is presented.

In this summarization, the language skills of the mildly intellectually disabled participants are contrasted with the language skills evidenced by the normal-

progress students who participated in this study. The dimensions of the performance of the intellectually disabled students on the Test of Pragmatic Language (Phelps-Terasaki & Phelps-Gunn, 1992) and Test of Adolescent and Adult Language (3rd ed.) (Hammill et al., 1994) are explored. For each language test, data for the overall sample and for the grade and gender of subjects is presented. A comparison with the normal-progress students is made.

Test of Pragmatic Language (TOPL)

Table 1 presents the descriptive statistics for the intellectually disabled students and the normal-progress students on the Test of Pragmatic Language (TOPL) (Phelps-Terasaki & Phelps-Gunn, 1992). The mean *raw score* for the 25 intellectually disabled students was 33.48 (standard deviation = 3.39); the mean *raw score* for the 25 normal-progress students was 39.40 (standard deviation = 2.02). On this test, the average *age equivalency* was 108.60 months (standard deviation = 23.53) for the intellectually disabled students and 164.4 months (standard deviation = 20.49) for the normal-progress peers.

Since Table 1 depicts both the *test age* and *age equivalency* on the Test of Pragmatic Language (TOPL) (Phelps-Terasaki & Phelps-Gunn, 1992) for each of the groups, these figures can be used to calculate the mean *delay* for each group of participants. The mean *delay* was defined as the difference between mean chronological age (*test age*) and mean *age equivalency*. For the intellectually disabled group, the average difference between chronological age (mean = 168.92 months) and age equivalency (mean = 108.60 months) was computed. The

Table 1: Descriptive Statistics for the Test of Pragmatic Language (TOPL), by Group

	Intellectually - Disabled				Normal - Progress			
TOPL	n	M	SD	Range	n	M	SD	Range
Raw score	25	33.48	3.39	23-39	25	39.40	2.02	36-44
%ile[a]	11	21.36	10.89	6-40	22	57.32	13.37	33-91
Quotient[a]	11	87.18	6.06	77-96	22	102.82	5.84	93-120
A. E.[b] (months)	25	108.60	23.53	66-162	25	164.40	20.49	126-186
Test Age (months)	25	168.92	11.39	150-189	25	158.12	8.07	145-171

[a]The number of observations n is less than 25, as some participants' chronological age exceeded 13-11, the upper limit of the normative tables. [b] "Age equivalency" achieved on the TOPL (months).

intellectually disabled students on average scored 60.32 months (standard deviation = 24.43) *below* their chronological age at the time of TOPL test administration. In comparison, the normal-progress participants achieved an average age equivalency of 164.40 months, 6.28 months (standard deviation = 24.24) *above* their chronological age (mean = 158.12 months), at the time of TOPL test administration. Hence, there was clear evidence of impaired pragmatic language performance for the intellectually disabled students, according to the TOPL.

Test of Adolescent and Adult Language (TOAL-3)

Descriptive statistics for the intellectually disabled students' performance (n = 25) and for the normal-progress students' performance (n = 25) on the Test of Adolescent and Adult Language (3rd ed.) (TOAL-3), (Hammill et al., 1994) are depicted in Table 2. The mean *total quotient* on the TOAL-3 as well as the mean quotients for *listening, speaking, reading, writing, spoken language, written language, vocabulary, grammar, receptive language,* and *expressive language* are presented in Table 2.

TOAL-3 *Total Quotient*

First, the mean *total quotients* attained by the intellectually disabled students (n = 25) and by the normal-progress students (n = 25) are considered. According to the developers of the Test of Adolescent and Adult Language (3rd ed.) (TOAL-3) (Hammill et al., 1994), the *total quotient* represents overall general language ability. This is because all eight TOAL-3 subtests contribute to this score. That is,

Table 2: Quotients attained by the Intellectually Disabled and Normal-Progress Students on the Test of Adolescent and Adult Language (3rd ed.) (TOAL-3)

	Intellectually - Disabled (n = 25)			Normal - Progress (n = 25)		
TOAL-3 Quotient	M	SD	Range	M	SD	Range
TOTAL	57.60	10.17	41-81	95.92	14.34	67-117
Listening	70.84	14.32	52-94	96.60	14.84	57-121
Speaking	66.52	11.64	49-100	93.88	17.37	52-118
Reading	59.84	6.87	49-76	96.92	18.50	53-133
Writing	57.16	9.55	46-82	95.84	18.25	53-124
Spoken Language	65.28	13.34	45-97	95.24	14.69	63-120
Written Language	53.80	8.03	42-77	96.96	15.78	70-123
Vocabulary	61.00	11.67	43-87	99.04	15.03	63-123
Grammar	58.28	8.62	45-77	93.24	16.34	67-122
Receptive	61.44	10.94	47-83	97.44	13.42	75-118
Expressive	57.60	10.05	42-80	94.88	17.04	60-122
Test Age (months)	169.64	11.39	150-189	159.32	8.41	146-172

the mean *total quotient* for each group of subjects ("intellectually disabled" and "normal-progress") is representative of those groups' global competence in the areas of listening, speaking, reading and writing, as well as all other aspects of the TOAL-3 test model. With respect to the TOAL-3 *total quotient*, the overall performance of the normal-progress students was clearly superior. The normal-progress students attained a mean TOAL-3 *total quotient* of 95.92 (standard deviation = 14.34). In contrast, the mean TOAL-3 *total quotient* for the intellectually disabled students was 57.60 (standard deviation = 10.17). According to the TOAL-3 examiner's manual, the mean *total quotient* for the normal-progress students merits the description of "average" performance. The mean *total quotient* for the intellectually disabled students, however, corresponds to the descriptor "very poor" given in the TOAL-3 examiner's manual.

Compared to the American Psychiatric Association's (DSM-IV, 1994), "mental retardation" severity levels, the mean *total quotient* attained by the intellectually disabled students corresponded in general with the description for "mild mental retardation". Therefore, the intellectually disabled student group nominated for participation in the study appeared to be representative of the population of interest, namely mildly intellectually disabled adolescents. Similarly, the normal-progress students represented individuals with "average" language performance.

TOAL-3 Modes: *Listening, Speaking, Reading,* and *Writing* Quotients

These four quotients reflect the performance of the intellectually disabled participants and the normal-progress participants in the following areas: *listening* (the ability to comprehend spoken language); *speaking* (the ability to express thoughts orally); *reading* (the ability to understand graphic messages); and, *writing* (the ability to express ideas in graphic form). In each of these areas of language performance, the intellectually disabled subjects scored more poorly than the normal-progress subjects. For example, in Table 2, the mean quotient attained by the intellectually disabled student group for the *listening* mode was 70.84 (standard deviation = 14.32). In contrast, the normal-progress student group attained a mean *listening* score of 96.60 (standard deviation = 14.84). That is, in the listening domain, the mean performance of the intellectually disabled students was "poor" whereas the mean performance of the normal-progress students was "average", according to the examiner's manual (Hammill et al., 1994). With reference to Table 2, it can be seen that the normal-progress group also exhibited mean quotients for *speaking*, *reading*, and *writing* which fell in the "average" range (defined in the examiner's manual as quotients between 90 and 110). In comparison, the intellectually disabled students performed in the "very poor" range: *speaking* (mean = 66.52, standard deviation = 11.64); *reading* (mean = 59.84, standard deviation = 6.87); and, *writing* (mean = 57.16, standard deviation = 9.55). Overall, the intellectually disabled students demonstrated their best

performance in the *listening* mode, followed by, in descending order, *speaking*, *reading*, and *writing*.

TOAL-3 Forms: *Spoken* and *Written Language* Quotients

According to the developers of the Test of Adolescent and Adult Language (TOAL-3) (Hammill et al., 1994), *form* refers to the "code medium" that individuals use to communicate with one another. The TOAL-3 examines two language forms: *spoken language* and *written language*. *Spoken language* measures the ability to speak and listen; *written language* measures "literacy" (the ability to write and read). Table 2 indicates that the normal-progress students exhibited "average" performance both for *spoken language* (mean quotient = 95.24, standard deviation = 14.69) and for *written language* (mean quotient = 96.96, standard deviation = 15.78). The intellectually disabled participants, however, exhibited "very poor" performance in these domains. The mean *spoken language* quotient for the intellectually disabled participants was 65.28 (standard deviation = 13.34); the mean *written language* quotient for the intellectually disabled student group was 53.80 (standard deviation = 8.03). Hence, deficits in spoken language and in literacy were evident for the intellectually disabled group.

TOAL-3 Features: *Vocabulary* and *Grammar* Quotients

The *vocabulary* quotient of the Test of Adolescent and Adult Language (3rd ed.) (TOAL-3) (Hammill et al., 1994) measures the ability to comprehend and use words appropriately in spoken and written communication. The TOAL-3's *grammar* quotient measures the ability to comprehend and generate syntactic

structures in spoken and written communications. The mean *vocabulary* and *grammar* quotients for the intellectually disabled participants and for the normal-progress students are depicted in Table 2. Again, the normal-progress student group evidenced "average" performance in vocabulary (mean *vocabulary* quotient = 99.04, standard deviation = 15.03) and "average" performance in grammar (mean *grammar* quotient = 93.24, standard deviation = 16.34). The intellectually disabled students demonstrated "very poor" performance in both of these domains. The mean *vocabulary* quotient for the intellectually disabled group was 61.00 (standard deviation = 11.67); the mean *grammar* quotient for this group was 58.28 (standard deviation = 8.62). Therefore, the intellectually disabled students performed considerably poorer than the normal-progress students in the areas of vocabulary and grammar, as measured by the TOAL-3.

TOAL-3 Systems: *Receptive* and *Expressive Language* Quotients

On the Test of Adolescent and Adult Language (3rd ed.) (TOAL-3) (Hammill et al., 1994), the term "system" refers to outgoing (*expressive*) or incoming (*receptive*) information. The TOAL-3 *receptive language* quotient measures the ability to understand both spoken and written communications; the TOAL-3 *expressive language* quotient measures the ability to produce spoken and written communications. The normal-progress students exhibited "average" abilities for these two systems. That is, the mean *receptive language* quotient for the normal-progress students was 97.44 (standard deviation = 13.42); the mean *expressive language* quotient for the normal-progress students was 94.88 (standard deviation

= 17.04). In contrast, the intellectually disabled student group demonstrated "very poor" performance in *receptive* and *expressive language*. The intellectually disabled students attained a mean *receptive language* quotient of 61.44 (standard deviation = 10.94) and a mean *expressive language* quotient of 57.60 (standard deviation = 10.05).

In summary, for the normal-progress group, the mean Test of Adolescent and Adult Language (3rd ed.) (TOAL-3) (Hammill et al., 1994) *total quotient* fell in the average range. Also, the mean TOAL-3 quotients for *listening, speaking, reading, writing, spoken language, written language, vocabulary, grammar, receptive language,* and *expressive language* were in the "average" range for the normal-progress group.

In contrast, the mean performance for the intellectually disabled group was "very poor" for all Test of Adolescent and Adult Language (3rd ed.) (TOAL-3) (Hammill et al., 1994) quotients. *Listening* was the exception, being an area less weak than the other areas (meriting a rating of "poor" rather than "very poor"). As mentioned, the mean language quotients attained by the intellectually disabled participants on the TOAL-3 appeared consistent with what one might expect for students with mild intellectual disability. As reflected in Table 2, these mean quotients ranged from 53.80 (for *written language*) to 70.84 (for *listening*). Individuals with mild mental retardation have I.Q. levels of 50-55 to approximately 70 (DSM-IV, 1994). The mean language quotients attained by the intellectually disabled students generally fell within this approximate range.

Language Differences between Dyad Members

Differences between the dyad members on the language measures were of interest, therefore these differences (n = 25) were considered. Table 3 provides each subject's (N = 50): (a) *raw score* on the pragmatic language measure, the Test of Pragmatic Language (TOPL) (Phelps- Terasaki & Phelps-Gunn, 1992); and (b) *total quotient* on the general language measure, the Test of Adolescent and Adult Language (3rd ed.) (TOAL-3), (Hammill et al., 1994). In addition, for the two language measures (TOPL and TOAL-3), the *difference* between the aforementioned scores for each dyad is given. Each *difference score* was calculated by subtracting the intellectually disabled student's score from the score attained by her/his normal-progress partner. For example, consider dyad 17. The normal-progress student achieved a TOPL *raw score* of 39, whereas the intellectually disabled student attained a TOPL *raw score* of 35, a *difference* of 4 points. The normal-progress student for dyad 17 attained a TOAL-3 *total quotient* of 109, while the intellectually disabled student achieved a TOAL-3 *total quotient* of 53, a *difference* of 56 points.

Table 3 indicates that the normal-progress peer typically exceeded the intellectually disabled student on the Test of Pragmatic Language (TOPL) (Phelps-Terasaki & Phelps-Gunn, 1992) (except for one dyad in which the intellectually disabled student exceeded the normal progress student by one point). The normal-progress peer superseded the intellectually disabled student on the Test of

Table 3: TOPL and TOAL-3 Scores by Dyad Including the Difference between the Normal-Progress and Intellectually Disabled Students' Scores

		TOPL Raw Score			TOAL-3 Total Quotient		
Dyad	Sex	Normal - Progress	Intellectually - Disabled	Difference[c]	Normal - Progress	Intellectually - Disabled	Difference[c]
1	F	40	30	10	85	52	33
2	F	38	39	-1	111	65	46
3	F	40	30	10	117	49	68
4	M	37	34	3	105	64	41
5	F	41	23	18	103	41	62
6	M	36	32	4	97	53	44
7	M	37	35	2	92	67	25
8	M	44	34	10	99	62	37
9	M	38	31	7	79	67	12
10	F	42	38	4	94	62	32
11	M	41	34	7	89	49	40
12	M	42	32	10	113	75	38
13	F	39	30	9	116	48	68
14	M	41	37	4	117	81	36
15	M	38	33	5	74	63	11
16	M	38	36	2	83	49	34
17	F	39	35	4	109	53	56
18	F	41	38	3	92	47	45
19	F	40	34	6	88	45	43
20	M	37	31	6	95	52	43
21	F	41	37	4	97	58	39
22	F	36	33	3	67	45	22
23	M	40	34	6	110	60	50
24	F	40	32	8	94	65	29
25	F	39	35	4	72	68	4

[a]Test of Pragmatic Language. [b]Test of Adolescent and Adult Language (3rd ed.). [c]Each difference score was calculated by subtracting the intellectually disabled student's score from the score of the normal-progress partner.

Adolescent and Adult Language (3rd ed.) (TOAL-3) (Hammill et al., 1994) for all dyads, according to Table 3.

Group Differences on the Language Measures

Table 4 summarizes the overall differences between the intellectually disabled participants and the normal-progress participants: (a) for the Test of Pragmatic Language (TOPL) (Phelps-Terasaki & Phelps-Gunn, 1992) *raw score*; and (b) the Test of Adolescent and Adult Language (3rd ed.) (TOAL-3) (Hammill et al., 1994) *total quotient*. In terms of the *raw score* on the TOPL, the average difference between the normal-progress student and the intellectually disabled student was 5.92 points (standard deviation = 3.85). That is, on average, the intellectually disabled student scored 5.92 points below her/his normal-progress partner. The mean difference between the normal-progress student and the intellectually disabled student for the TOAL-3 *total quotient* was 38.32 points (standard deviation = 16.08). Again, the intellectually disabled students' scores fell below the normal-progress students' scores. The aforementioned differences indicated that there were obvious discrepancies between the dyad members in terms of their overall performance on the language measures. Differences were evident both in pragmatic language performance (measured by the TOPL) and in linguistic performance (measured by the TOAL-3).

Table 4: Summary Statistics for the Difference[a] between the Intellectually Disabled and Normal-Progress Students on the Language Tests

	Differences between the Normal - Progress & Intellectually - Disabled Dyad Members			
Test	n	M	SD	Range
TOPL[b] (Raw Score)	25	5.92	3.85	-1 to 18
TOAL - 3 [c] (Total Quotient)	25	38.32	16.08	4 to 68

[a]Each difference score was calculated by subtracting the intellectually disabled student's score from the score attained by the normal-progress partner. [b]TOPL: Test of Pragmatic Language. [c]TOAL-3: Test of Adolescent and Adult Language (3rd ed.)

Language Scores by Grade

The subject samples included intellectually disabled students and their normal-progress peers enrolled in grades 7 through 9. Tables 5 and 6, respectively, provide the summary statistics by grade for the two language measures. In Table 5, the summary statistics by grade for the Test of Pragmatic Language (TOPL) (Phelps-Terasaki & Phelps-Gunn, 1992) *raw score* and *age equivalency* are given. In Table 6, the summary statistics by grade for the Test of Adolescent and Adult Language (3rd ed.) (TOAL-3) (Hammill et al., 1994) *total quotient* are given. Visual inspection of these tables suggests that the grade 7 to 9 grouping of subjects represents reasonably homogeneous language performance both for the students with intellectual disability and for the normal-progress peers.

The intellectually disabled students performed similarly on the Test of Pragmatic Language (TOPL) (Phelps-Terasaki & Phelps-Gunn, 1992), irrespective of grade. Table 5 indicates that there was less than a three point spread in the mean TOPL *raw scores* of the intellectually disabled students in grades 7 - 9 (31.50 lower bound to 34.45 upper bound). Table 5 also depicts approximately a 10-month spread in the mean TOPL *age equivalency* attained by the intellectually disabled students. The intellectually disabled students also performed similarly on the Test of Adolescent and Adult Language (3rd ed.) (TOAL-3) (Hammill et al., 1994), irrespective of grade. Table 6 indicates that the intellectually disabled

Table 5: Intellectually Disabled and Normal-Progress Students' Test of Pragmatic Language (TOPL) Scores, Summarized by Grade

		Intellectually - Disabled				Normal - Progress			
Grade	TOPL Score	n	M	SD	Range	n	M	SD	Range
7	Raw Score	11	34.45	2.25	30-38	12	39.83	1.90	37-44
	A.E.[a]	11	113.18	18.88	87-150	12	169.00	17.32	138-186
8	Raw Score	12	32.92	4.25	23-39	11	39.18	2.09	36-42
	A.E.[a]	12	107.00	28.44	66-162	11	162.00	22.13	126-186
9	Raw Score	2	31.5	2.12	30-33	2	38.00	2.82	36-40
	A.E.[a]	2	93.00	8.44	87-99	2	150.00	33.94	126-174

Note. Higher scores represent superior performance.

[a]Age equivalency achieved on the TOPL (expressed in months).

students' mean TOAL-3 *total quotients* for each grade were essentially within 10 points of each other, (47.00 lower bound, 57.18 upper bound).

The normal-progress students also performed similarly on the two language measures, irrespective of grade. Table 5 indicates that there was less than a two point spread in the mean Test of Pragmatic Language (TOPL) (Phelps-Terasaki & Phelps-Gunn, 1992) *raw scores* of the normal-progress students in grades 7 to 9 (38.00 lower bound, 39.83 upper bound). Table 5 also shows a 19-month spread in the mean TOPL *age equivalency* of the normal-progress students in grades 7 to 9. Table 6 indicates that the normal-progress students' mean Test of Adolescent and Adult Language (3rd ed.) (TOAL-3) (Hammill et al., 1994) *total quotients* fell within eight points of each other, for students in grades 7 to 9 (92.00 lower bound, 99.45 upper bound).

Language Performance by Gender

The subjects for the study included male and female adolescents. A breakdown of the students' language scores by gender and group is presented in Table 7. The Test of Pragmatic Language (TOPL) (Phelps-Terasaki & Phelps-Gunn, 1992) *raw score*, the TOPL *age equivalency*, and the Test of Adolescent and Adult Language (3rd ed.) (TOAL-3) (Hammill et al., 1994) *total quotient* are depicted in Table 7.

Table 6: Total Quotient on the Test of Adolescent and Adult Language (3rd ed.) (TOAL-3), Summarized by Grade and Group

	Intellectually - Disabled				Normal - Progress			
	TOAL-3 Total Quotient				TOAL-3 Total Quotient			
Grade	n	M	SD	Range	n	M	SD	Range
7	11	57.18	8.19	47-68	12	93.33	12.99	72-117
8	12	59.75	11.76	41-81	11	99.45	12.57	79-117
9	2	47.00	2.83	45-49	2	92.00	35.36	67-117

Table 7: Performance on the Test of Pragmatic Language (TOPL), by Gender and Group

		Intellectually - Disabled				Normal - Progress			
Sex	TOPL Score	M	SD	Range	n	M	SD	Range	n
Female	Raw Score	33.38	4.44	23-39	13	39.69	1.55	36-42	13
	A. E.[a]	111.69	29.77	66-162	13	169.38	17.35	126-186	13
	Test Age[b]	171.08	13.01	155-189	13	158.77	8.53	148-170	13
Male	Raw Score	33.58	1.88	31-37	12	39.08	2.45	36-44	12
	A.E.[a]	105.25	14.72	90-138	12	159.00	22.95	126-186	12
	Test Age[b]	166.58	9.34	150-183	12	157.42	7.86	145-167	12

Note. Higher scores indicate superior pragmatic language performance.

[a]Age equivalency achieved on the TOPL (expressed in months). [b]Age (in months) at the time of test administration.

Test of Pragmatic Language (TOPL):

Males vs. Females

Inspection of Table 7 indicates that the male intellectually disabled students and the female intellectually disabled students performed similarly on the Test of Pragmatic Language (TOPL) (Phelps-Terasaki & Phelps-Gunn, 1992), the pragmatic language measure. The mean TOPL *raw score* was 33.39 (standard deviation = 4.44) for the female intellectually disabled students; the mean TOPL *raw score* was 33.58 (standard deviation = 1.88) for the male intellectually disabled students. Furthermore, the normal-progress males and the normal-progress females performed similarly on the TOPL. The mean TOPL *raw score* was 39.69 (standard deviation = 1.55) for the female normal-progress students; the mean TOPL *raw score* was 39.08 (standard deviation = 2.45) for the male normal-progress students.

Intellectually Disabled vs. Normal-Progress

Comparison of the intellectually disabled and the normal-progress students within gender revealed lower Test of Pragmatic Language (TOPL) (Phelps-Terasaki & Phelps-Gunn, 1992) scores for the intellectually disabled students. Consider first the females. The mean TOPL *raw scores* (and *age equivalency*) for the intellectually disabled females and for the normal-progress females were 33.38 (111.69 months) and 39.69 (169.38 months), respectively. Next, consider the males. The mean TOPL *raw scores* (*age equivalency*) for the intellectually

disabled males and for the normal-progress males were 33.58 (105.25 months) and 39.08 (159.00 months), respectively. In conclusion, the intellectually disabled females performed more poorly than the normal-progress females on the TOPL. Similarly, there was a gap in performance levels between the intellectually disabled and the normal-progress males on the TOPL.

Test of Adolescent and Adult Language (3rd ed.) (TOAL-3):

Males vs. Females

Visual inspection of the data revealed that for the general language measure, the Test of Adolescent and Adult Language (3rd ed.) (TOAL-3) (Hammill et al., 1994), the intellectually disabled males exhibited superior language performance compared to the intellectually-disabled females. Table 8 indicates that the mean TOAL-3 *total quotient* attained by the male intellectually disabled participants was 61.83 (standard deviation = 10.03). The mean TOAL-3 *total quotient* for the female intellectually disabled participants was 53.69 (standard deviation = 8.96). Hence, the male intellectually disabled students demonstrated higher general language performance than the female intellectually disabled students taking part in this study. This is despite the fact that the intellectually disabled females on average were older (mean test age = 171.85 months; standard deviation = 12.88) than the intellectually disabled males (mean test age = 167.25 months; standard deviation = 9.48), at the time of the TOAL-3 administration. In contrast, a discrepancy in TOAL-3 performance between the male normal-progress students

Table 8: Performance on the Test of Adolescent and Adult Language (3rd ed.) (TOAL-3), by Gender and Group

		Intellectually - Disabled				Normal - Progress			
Sex	TOAL-3	n	M	SD	Range	n	M	SD	Range
Female	Total Quotient	13	53.69	8.96	41-68	13	95.77	15.57	67-117
	Test Age[a] (months)	13	171.85	12.88	155-189	13	160.08	9.13	148-172
Male	Total Quotient	12	61.83	10.03	49-81	12	96.08	13.57	74-117
	Test Age[a] months)	12	167.25	9.48	150-183	12	158.50	7.88	145-169

Note. Higher TOAL-3 total quotients represent superior general language performance.

[a]Age in months at the time of test administration.

and the female normal-progress students was not evident. Visual inspection of Table 8 reveals that the normal-progress males and the normal-progress females performed similarly on the TOAL-3. That is, the mean *total quotient* on the TOAL-3 was 96.08 (standard deviation = 13.57) for the normal-progress males and 95.77 (standard deviation = 15.57) for the normal-progress females. Normal-progress males and females also were similar in age (see Table 8).

Intellectually Disabled vs. Normal-Progress

Comparison of the intellectually disabled and normal-progress students within gender was conducted. This revealed poorer overall Test of Adolescent and Adult Language (3rd ed.) (TOAL-3) (Hammill et al., 1994) performance by the intellectually disabled participants. Table 8 indicates that the intellectually disabled males and females performed more poorly than the normal-progress males and females, respectively. Consider first the females. The mean TOAL-3 *total quotients* for the intellectually disabled females and for the normal-progress females were 53.69 (standard deviation = 8.96) and 95.77 (standard deviation = 15.57), respectively. Next, consider the males. The mean TOAL-3 *total quotients* for the intellectually disabled males and for the normal-progress males were 61.83 (standard deviation = 10.03) and 96.08 (standard deviation = 13.57), respectively.

In conclusion, evaluation of hypothesis 1 revealed that the mildly intellectually disabled adolescents demonstrated clear evidence of pragmatic language

impairments and impaired linguistic competence as identified by the Test of Pragmatic Language (TOPL) (Phelps-Terasaki & Phelps-Gunn, 1992) and the Test of Adolescent and Adult Language (3rd ed.) (TOAL-3) (Hammill et al., 1994), respectively.

2. ***Intellectually Disabled and Normal Adolescents' Strategies for Negotiating Disagreements.***

The following general hypothesis was examined:

Mildly intellectually disabled adolescents will demonstrate qualitative and quantitative differences in the conversational strategies that they employ for negotiating disagreements that arise in a dyadic problem-solving task with a normal-progress peer.

A qualitative, descriptive analysis of conflict components is presented.

Descriptive Statistics

Number of conflicts

Across the 25 dyads, 211 verbal disagreements were identified and analyzed. The number of disagreements per dyad ranged from 1 to 15. On average, there were 8.44 (standard deviation = 5.06) verbal disagreements per dyadic interaction session. The 13 female dyads accounted for 92 (43.60%) of the verbal disagreements; the 12 male dyads accounted for 119 (56.40%) of the disagreements. That is, on average, there were 7.08 (standard deviation = 4.37)

conflicts per female dyad, whereas on average there were 9.92 (standard deviation = 5.52) conflicts per male dyad. Therefore, visual inspection of the data indicated that the female dyads demonstrated a lower overall rate of conflict than the male dyads.

Conflict length

Disagreements lasted on average for 2.19 conversational turns (standard deviation = 1.88) and ranged from 1 to 15 turns in length. Table 9 provides data concerning how frequently conflicts of various lengths arose during the educational activity. Most conflicts were short. In fact, 85.8% of the verbal disputes were less than four conversational turns in length. The vast majority of conflicts during the learning engagement were single turn conflicts (48.3%). Conflicts lasting two conversational turns occurred 26.1% of the time. Those lasting three turns accounted for 11.4% of the total number of verbal disagreements. Only 14.2% of all verbal disagreements exceeded three conversational turns.

Visual inspection of Table 10 shows that conflict length, measured by number of conversational turns, was similar for the male and female dyads. Of the 92 conflicts arising between females, 84.79% consisted of 1 to 3 conversational turns. Similarly, of the 119 conflicts arising between males, 86.58% consisted of 1 to 3 conversational turns. Table 10 indicates that single turn conflicts occurred about 48% of the time for males and females. Conflicts lasting two turns accounted for approximately 26% of the conflicts in which males and females took part. Those disputes lasting three turns accounted for approximately 11% of the conflicts, for

Table 9: Number of Conversational Turns in Verbal Disagreements arising between Normal-Progress and Intellectually Disabled Students

Number of Turns	Frequency	%	Cumulative Frequency	Cumulative %
1	102	48.3%	102	48.3%
2	55	26.1%	157	74.4%
3	24	11.4%	181	85.8%
4	8	3.8%	189	89.6%
5	5	2.4%	194	91.9%
6	11	5.2%	205	97.2%
7	2	0.9%	207	98.1%
8	1	0.5%	208	98.6%
9	1	0.5%	209	99.1%
10	1	0.5%	210	99.5%
15	1	0.5%	211	100%

Table 10: Length[a] of the Verbal Conflicts arising between Intellectually Disabled and Normal-Progress Students, by Gender

	Gender					
	Female		Male		Total	
Number of Turns	No.[b]	%	No.[b]	%	No.[b]	%
1	44	47.83%	58	48.74%	102	48.34%
2	24	26.09%	31	26.05%	55	26.07%
3	10	10.87%	14	11.76%	24	11.37%
More Than Three	14	15.21%	16	13.44%	30	14.22%
Total	92	100%	119	100%	211	100%

[a]Length of Disagreements was measured in number of conversational turns. [b]No.: Refers to the number of verbal conflicts.

both male and female dyads. In summary, the male and female dyads demonstrated similar profiles for conflict length. In this study, longer "mutual conflicts" were distinguished from single turn "compliance exchanges" (refer to Table 10). Table 10 provides a breakdown of the total number verbal disagreements which were single turn "compliance exchanges" versus those which were longer disagreements. Of the 211 verbal disagreements arising during the learning task, 109 (51.64%) were considered to be longer "mutual conflicts". "Compliance exchanges" occurred frequently during the learning task. In fact, 102 of the 211 (48.34%) verbal disputes were of this type. Male and female dyads engaged in "compliance exchanges" at similar rates (48.74% for males, 47.83% for females), according to Table 10.

Referring to Table 11, 63 of these 102 "compliance exchanges" (61.76%) were initiated by the normal-progress peer and not pursued by the intellectually disabled student. In comparison, 39 of these 102 "compliance exchanges" (38.24%) were initiated by the intellectually disabled student and not pursued by the normal-progress peer.

The "compliance exchange" findings reported in Table 11 need to be considered in conjunction with the data in Table 13. The rates of initiation of compliance exchanges by normal-progress (61.76%) and intellectually disabled (38.24%) students in Table 11 are similar to the overall rates of initiation of conflicts evidenced in Table 13 (63.98% for normal-progress students; 36.02% for intellectually disabled learners).

Table 11: Compliance Exchanges by Conflict Initiator (Normal-Progress and Intellectually Disabled)

Conflict Initiator	Frequency	%
Normal - Progress	63	61.76%
Intellectually - Disabled	39	38.24%
Total	102	100%

[a]Compliance exchanges: Verbal disagreements which are a single-turn in length.

Conflict Length by Conflict Initiator

In 135 of the 211 verbal disagreements, the intellectually disabled student was opposed by the normal-progress peer. Of these 135 conflicts, 63 (34.57%) were single-turn "compliance exchanges" and 72 (65.43%) were longer "mutual" conflicts. In 76 of the 211 verbal disagreements, the normal-progress peer was opposed by the intellectually disabled student. Of these 76 conflicts, 39 (51.32%) were single turn "compliance exchanges" and 37 (48.68%) were longer "mutual" conflicts. The aforementioned results indicate how: (a) the intellectually disabled students behaved when opposed; and (b) the normal-progress peers behaved when opposed. These findings suggest that intellectually disabled and normal-progress students respond differently when opposed, as single turn "compliance exchanges" were less likely when the normal-progress student initiated the conflict.

Explicit Negative

Overall, the explicit negative was used in only 15.17% (32) of the 211 disputes that occurred. That is, the explicit negative ("no") at the beginning of a verbal conflict was absent during 84.83% (179 of 211) of the verbal disagreements. Hence, the onset of a verbal dispute was seldom signaled by an explicit negative.

Consider the use of the explicit negative by the normal-progress and by the intellectually disabled students. For the 135 disagreements that were initiated by the normal-progress student, the explicit negative was employed 20 times (14.81%). For the 76 disagreements that were initiated by the intellectually

disabled student, the explicit negative was used 12 times (15.79%), a marginally higher rate. Therefore, whether there are differences between intellectually disabled and normal-progress students for use of the explicit negative is equivocal.

Next, consider male–female differences for use of the explicit negative. The female students used an explicit negative in 16.30% (15 of 211) of the verbal conflicts in which the female dyads engaged; the male students used the explicit negative in 14.29% (17 of 211) of the verbal conflicts. These figures represent marginal gender differences for the use of explicit "no" during verbal disagreements.

Speech Act

Disagreements arose in response to a partner's speech acts. In this study four types of speech acts were coded: "requests for permission", "requests for action", "statements of intent", and "statements of fact".

There were no conflicts initiated in response to a partner's "request for permission". There were, however, conflicts initiated in response to "requests for action", "statements of intent", and "statements of fact". The "request for action" precipitated most conflicts. Of the 211 conflicts recorded, 69.19% (146) occurred because the communication partner had made a "request for action". A further 15.64% (33 of the 211 conflicts) arose in response to the partner's "statement of intent", while 15.17% (32 of the 211 conflicts) arose following a "statement of fact". The types of "speech acts" which were opposed by the intellectually

disabled students versus those opposed by the normal-progress peers will be considered in depth under hypothesis 4 below.

Table 12 depicts, for male and female dyads, the type of speech act that precipitated the onset of a verbal disagreement. The percentages shown for each type of speech act indicate only subtle differences between the male and the female dyads for the "request for action" (68.07% for males dyads, 70.65% for female dyads), and for "statement of intent" (14.29% for males, 17.39% for females). Male dyads initiated verbal disagreements in response to a "statement of fact" more frequently than did females (17.65% for male dyads versus 11.96% for female dyads). Therefore, males may be more inclined to initiate verbal disagreements when a factual statement is at issue.

Conflict Initiator

Consider first the rate of conflict initiation by the normal-progress students and by the intellectually disabled students. Overall, the normal-progress students initiated verbal disagreements 63.98% of the time during the learning engagement. That is, 135 of the 211 conflicts were initiated by the normal-progress peer. The remaining 36.02% of the verbal conflicts were initiated by the intellectually disabled students (76 of the 211 conflicts). Therefore, considering all 211 verbal conflicts together, conflicts were initiated almost twice as frequently by the normal-progress students as by the intellectually disabled students.

Referring to Table 13, it is apparent that the female intellectually disabled students and the male intellectually disabled students initiated conflicts at similar

Table 12: Speech Act of the Utterance that Precipitated a Verbal Disagreement, by Gender

	Gender					
	Female		Male		Total	
Speech Act	No.[a]	%	No.[a]	%	No.[a]	%
Request for Action	65	70.65%	81	68.07%	146	69.19%
Statement of Intent	16	17.39%	17	14.29%	33	15.64%
Statement of Fact	11	11.96%	21	17.65%	32	15.17%
Request for Permission	0	0%	0	0%	0	0%
Total	92	100%	119	100%	211	100%

[a]No.: Refers to the number of verbal conflicts.

Table 13: Initiator of Conflict, by Gender

	Normal - Progress		Intellectually - Disabled		Total	
Gender	No.[a]	%	No.[a]	%	No.[a]	%
Female	58	63.04%	34	36.96%	92	100%
Male	77	64.71%	42	35.29%	119	100%
Total	135	63.98%	76	36.02%	211	100%

[a]No.: Refers to the number of verbal conflicts.

rates (36.96% and 35.29%, respectively). However, the female normal-progress students initiated verbal conflicts almost twice as frequently as did their female intellectually disabled counterparts. Of the 92 verbal conflicts arising between the female pairs, 63.04% (58 of the disputes) were initiated by the normal-progress student, whereas 36.96% (34) were initiated by the intellectually disabled student. A similar picture was noted for the male participants. For the male dyads, 64.71% (77 of the 119 disputes) were initiated by the normal-progress student while 35.29% (42 of the 119 disputes) were initiated by the intellectually disabled student. Therefore, visual inspection of Table 13 suggests no obvious differences between male and female dyads for initiation of verbal disagreements.

Conflict-Initiating Moves

The initial opposition strategies used during the verbal disagreements which arose between the intellectually disabled and the normal-progress participants is discussed below under hypothesis 4, *"Strategies used by Students when in the Role of Opposer versus Opposee"*.

Negative Affect

Negative affect seldom occurred in verbal conflicts and consisted primarily of slightly increased: vocal harshness/intensity, speech rate, or prosodic emphasis. There were no instances of yelling, screaming, crying or dramatic increases in vocal intensity.

Overall, negative affect occurred in about 15% of the entire sample of conflicts, which represents a small proportion of the conflicts (see Table 14). The intellectually disabled students and the normal-progress students demonstrated negative affect at similar rates. That is, the normal-progress students displayed negative affect in 15.17% (32) of the 211 conflicts; the intellectually disabled adolescents displayed negative affect in 14.69% (31) of the 211 conflicts. Therefore, the normal-progress students and the intellectually disabled students exhibited negative affect at similar rates.

The occurrence of negative affect in "mutual conflicts" was of interest. Therefore, the presence of negative affect in the 109 "mutual conflicts" (conflicts which were two or more conversational turns in length) was considered. Table 15 depicts the absence/presence of negative affect for those conflicts which were two or more conversational turns. The normal-progress students displayed negative affect in 22.02% (24) of the 109 "mutual conflicts". The intellectually disabled students exhibited negative affect in 23.85% (26) of the 109 longer "mutual conflicts". Although this difference appeared to be marginal, the normal-progress students used negative affect slightly less often than did the intellectually disabled students. It should be noted that negative affect in longer "mutual conflicts" was more common than in all the conflicts taken together.

Male–female differences for the use of negative affect during conflicts were explored. The normal-progress female students exhibited negative affect during 14.13% (13) of the 92 verbal disagreements that the females had. The normal-progress male students exhibited negative affect during 15.97% (19) of the 119

Table 14: Negative Affect during Verbal Conflicts, by Group

	Normal-Progress		Intellectually Disabled	
Negative Affect	Frequency	%	Frequency	%
Absent	179	84.83%	180	85.31%
Present	32	15.17%	31	14.69%
Total	211	100%	211	100%

Table 15: Negative Affect for Disagreements with Two or More Conversational Turns, by Group

	Normal-Progress		Intellectually Disabled	
Negative Affect	Frequency	%	Frequency	%
Absent	85	77.98%	83	76.15%
Present	24	22.02%	26	23.85%
Total	109	100%	109	100%

verbal disagreements that the males had. The intellectually disabled females exhibited negative affect during 13.04% (12) of the 92 verbal disagreements in which the female pairs engaged. For the intellectually disabled males, negative affect was present during 15.97% (19) of the 119 verbal disagreements that the males had. Therefore, for the intellectually disabled students, as for the normal-progress students, negative affect was slightly more prevalent in males. This difference was less than 3%, however.

Justification within Verbal Disagreements

Next, the presence/absence of justification during verbal disputes between intellectually disabled and normal-progress learners was examined. The intellectually disabled students used justification at any point within the conflicts for 26.07% (55 of 211) of the disputes. By comparison, the normal-progress students used justification at any point within conflicts for 42.65% (90 of 211) of the disputes. Clearly, the normal-progress students employed justifications during verbal disagreements more often that did the intellectually disabled students.

Male–female differences for the use of justification within conflicts were evaluated. First, consider the intellectually disabled students. The female intellectually disabled students used justification for 22.83% (21 of 92) of the verbal disagreements in which the female dyads engaged; the male intellectually disabled students used justification for 28.57% (34 of 119) of the verbal disagreements in which the male dyads engaged. Hence, in the learning task, the male intellectually disabled students justified at a higher rate than did the female

intellectually disabled students. Next, consider the normal-progress students. The normal-progress female students used justification during 42.39% (39 of 92) of the disagreements between the female participants; the normal-progress male students used justification during 42.86% (51 of 119) of the disagreements between the male participants. Hence, in the present study, the normal-progress female students and the normal-progress male students justified at similar levels within conflicts.

In conclusion, overall the normal-progress students used justification at a higher rate than the intellectually disabled students. Also, the male intellectually disabled participants justified more frequently than did the female intellectually disabled participants during verbal disagreements.

Dispute Topic

Table 16 provides a breakdown of the frequency of the dispute topics captured by the coding system. Of the 211 disputes recorded, 80.10% (169) were classified as disputes about "lesson content". A further 16.59% (35 of 211) of the verbal disputes arose because of disagreement about how to run the lesson ("lesson process"). Disagreements about unwanted "assistance" were rare, occurring in 2.84% (6 of 211) of the conflicts. Disputes for which the topic could not be classified ("other") were also infrequent, occurring 0.47% of the time (1 of 211 disagreements).

Table 17 depicts, for males and females, the dispute topic of the verbal conflicts. The rank ordering of the dispute topics was identical for the male and

Table 16: Topic of Verbal Disagreements arising between Normal-Progress and Intellectually Disabled Students

Dispute Topic	Frequency	%	Cumulative Frequency	Cumulative %
Lesson Content	169	80.10%	169	80.10%
Lesson Process	35	16.59%	204	96.69%
Assistance	6	2.84%	210	99.53%
Other	1	0.47%	211	100%
Total	211	100%		

Table 17: Dispute Topic, by Gender

	Gender					
	Female		Male		Total	
Dispute Topic	No.[a]	%	No.[a]	%	No.[a]	%
Lesson Content	76	82.61%	93	78.15%	169	80.10%
Lesson Process	15	16.30%	20	16.81%	35	16.59%
Assistance	1	1.09%	5	4.20%	6	2.84%
Other	0	0%	1	0.84%	1	0.47%
Total	92	100%	119	100%	211	100%

[a]No.: Refers to the number of verbal conflicts.

the female dyads: "lesson content" (78.15% for male dyads, 82.61% for female dyads); "lesson process" (16.81% for males, 16.30% for females); "assistance" (4.20% for males, 1.09% for females); and, "other" (0.84% for males, 0% for females). Males were slightly less inclined to dispute about "lesson content" than females, and somewhat more inclined to dispute unwanted assistance.

Tables 18 and 19 present the female and male patterns for dispute topic by conflict initiator (the normal-progress student versus the intellectually disabled student). Consider first the females (Table 18). The normal-progress females were more likely to debate "lesson content" than were the intellectually disabled females (86.21% vs. 76.47%). The intellectually disabled females, however, were more apt to engage in disputes over "lesson process" (20.59% vs. 13.79%). The intellectually disabled females disputed "assistance" (2.94%) whereas the normal-progress females did not. Next, consider the males (Table 19). Inspection of Table 19 reveals a similar pattern for males as that just described for the females.

Last Turn

In what follows, the student taking the last conversational turn in verbal disagreements is considered. The normal-progress participant took the last conversational turn for 53.08% (112 of 211) of the verbal disputes. The intellectually disabled participant held the last turn for 46.92% (99 of 211) of the disputes. Hence, the intellectually disabled students took the last turn in a conflict less often than did the normal-progress students.

Table 18 Dispute Topic by Conflict Initiator (Females)

	Initiator: Normal-Progress		Initiator: Intellectually Disabled	
Dispute Topic	Frequency	%	Frequency	%
Lesson Content	50	86.21%	26	76.47%
Lesson Process	8	13.79%	7	20.59%
Assistance	0	0%	1	2.94%
Other	0	0%	0	0%
Total	58	100%	34	100%

Table 19 Dispute Topic by Conflict Initiator (Males)

	Initiator: Normal-Progress		Initiator: Intellectually Disabled	
Dispute Topic	Frequency	%	Frequency	%
Lesson Content	63	81.82%	30	71.43%
Lesson Process	12	15.58%	8	19.05%
Assistance	1	1.30%	4	9.52%
Other	1	1.30%	0	0%
Total	77	100%	42	100%

Male–female differences for this aspect of the verbal conflicts were examined. For female dyads, the intellectually disabled participant held the last conversational turn for 43.48% (40 of 92) of the verbal disagreements in which females engaged. The normal-progress females held the last turn for 56.52% (52 of 92) of these verbal disputes. In comparison, for male dyads, the intellectually disabled participant took the last turn for 49.58% (59 of 119) of the verbal disagreements in which males engaged. The normal-progress male took the last turn for 50.42% (60 of 119) of these verbal disputes. In summary, while the intellectually disabled males and the normal-progress males held the last conversational turn with approximately equal frequency, this was not so for the female dyads. Instead, the intellectually disabled females more frequently deferred to their normal-progress partner.

Another question which could be asked is: "Does the student who initiated a verbal conflict also take the last turn in the conflict?" In 83 of the 135 (61.48%) conflicts initiated by the normal-progress student, it was also the normal-progress student who held the last conversational turn. Similarly, in 47 of the 76 (61.84%) of the disputes initiated by the intellectually disabled student, it was also the intellectually disabled student who had the last word. Hence, there was some evidence to support the notion that the dyad member who starts a conflict has a greater probability of being the dyad member taking the last turn in the conflict. There were no apparent differences between the normal-progress students and the intellectually disabled students in this regard.

Dispute Outcome

Table 20 depicts the outcomes of the 211 verbal disagreements which took place during the educational activity. In 41.71% (88 of 211) of the verbal disagreements, the intellectually disabled dyad member submitted. In 31.28% (66 of 211) of the disputes, it was the normal-progress student who submitted. "Standoff" as a conflict outcome occurred for 20.85% (44 of 211) of the disputes. A "compromise" was reached in 6.16% (13 of 211) of the conflicts. Therefore, the rank ordering of conflict outcomes for this learning task was: 1 - intellectually disabled student submits; 2 - normal-progress student submits; 3 - standoff; and, 4 - compromise.

In Table 21, the breakdown for males and females with respect to each of the four conflict outcomes is also given. For male and female pairs alike, the rank orderings of the dispute outcomes were identical: submission by the intellectually disabled student was the most prevalent outcome (40.34% for male dyads, 43.48% for female dyads); followed by "normal submits" (29.41% for males, 33.70% for females); "standoff" (21.85% for males, 19.57% for females), and "compromise" (8.40% for males and 3.26% for females). The rank orderings of the conflict outcomes for the males and for the females (considered alone) paralleled the rank ordering of the conflict outcomes for the males and females considered together. However, it should be noted that the male dyads compromised or reached a standoff more frequently than did the female dyads. Furthermore, submission outcomes were observed less frequently for the male dyads than for the female dyads.

Table 20: Outcome of Verbal Disagreements arising between Normal-Progress and Intellectually Disabled Students

Dispute Outcome	Frequency	%	Cumulative Frequency	Cumulative %
Intellectually Disabled Submits	88	41.71%	88	41.71%
Normal-Progress Submits	66	31.28%	154	72.99%
Compromise	13	6.16%	167	79.15%
Standoff	44	20.85%	211	100%
Total Disagreements	211	100%		

Table 21: Dispute Outcome, by Gender

	Gender					
	Female		Male		Total	
Dispute Outcome	No.[a]	%	No.[a]	%	No.[a]	%
Intellectually Disabled Submits	40	43.48%	48	40.34%	88	41.71%
Normal-Progress Submits	31	33.70%	35	29.41%	66	31.28%
Compromise	3	3.26%	10	8.40%	13	6.16%
Standoff	18	19.57%	26	21.85%	44	20.85%
Total	92	100%	119	100%	211	100%

[a]No.: Refers to the number of verbal conflicts.

Table 22 presents the conflict outcomes for each of the 25 dyads. Individual differences in dyad performance were evident. In dyads 1 and 8, for example, the normal-progress student typically submitted. Dyads 3 and 10 illustrated the reverse, with the intellectually disabled dyad member usually submitting. Some dyads (for example, dyad 11) evidenced all four conflict outcomes, whereas other dyads exhibited only two (dyad 13) or three (dyad 6) of the four possible conflict outcomes. Only 7 of the 25 dyads ever reached a compromise whereas 22 of the 25 dyads had conflicts ending in a standoff.

In conclusion, evaluation of hypothesis 2 revealed that mildly intellectually disabled adolescents demonstrated qualitative and quantitative differences in the conversational strategies that they employed for negotiating disagreements. Qualitative differences were noted for: conflict initiator, conflict length by conflict initiator, justification within verbal disagreements, and dispute topic. Normal-progress students initiated conflicts almost twice as frequently as did the intellectually disabled students. Longer mutual disagreements ("genuine" conflicts) were less prevalent when the intellectually disabled student initiated conflicts than when the normal-progress peer did. The students with mild intellectual disabilities were less apt to provide a justification during disagreements than were the normal-progress students. The intellectually disabled students were more likely than their normal-progress peers to engage in disputes over "lesson process" and "assistance"; and less likely than normals to dispute "lesson content".

Table 22: Dispute Outcome, by Dyad and Gender

Dyad	Gender	Intellectually Disabled Submits	Normal-Progress Submits	Compromise	Standoff	Total Number of Conflicts
1	F	1	6	0	3	10
2	F	2	2	0	2	6
3	F	10	1	0	2	13
4	M	5	1	0	4	10
5	F	1	0	0	0	1
6	M	3	1	0	2	6
7	M	0	0	0	2	2
8	M	4	10	0	2	16
9	M	2	0	0	1	3
10	F	8	4	0	2	14
11	M	6	4	2	1	13
12	M	6	6	1	2	15
13	F	3	0	0	1	4
14	M	5	5	1	2	13
15	M	10	5	2	2	19

Dyad	Gender	Intellectually Disabled Submits	Normal-Progress Submits	Compromise	Standoff	Total Number of Conflicts
16	M	0	2	0	2	4
17	F	2	4	2	4	12
18	F	3	5	0	1	9
19	F	1	2	1	0	4
20	M	2	1	1	3	7
21	F	5	3	0	0	8
22	F	0	2	0	0	2
23	M	5	0	3	3	11
24	F	3	2	0	2	7
25	F	1	0	0	1	2

3. *Intellectually Disabled Students and the Initiation of Conflict.*

The following hypothesis was examined:

Intellectually disabled students will initiate verbal disagreements substantially less frequently than their normal-progress peers.

This hypothesis was assessed at the 0.05 level of significance.

This hypothesis was tested statistically in the following manner. For every dyad, the number of disagreements initiated by each member of the dyad was counted, as well as the total number of conflict exchanges per dyad. The percentage of conflicts initiated by the intellectually disabled student ($\underline{n} = 25$) was computed for every dyad. A Wilcoxon Signed Ranks test (Wilcoxon, 1945) was performed on the aforementioned scores. The null hypothesis that the proportion of conflicts initiated by the intellectually disabled student would equal or exceed 0.5 was rejected (Sign Rank = 6, p-value = .0005). Hence, in this learning engagement, one can conclude that the intellectually disabled students initiated verbal disagreements substantially less frequently than their normal-progress counterparts.

4. *Strategies used by Students when in the Role of Opposer versus Opposee.*

The following hypothesis was examined:

Students, when occupying the roles of opposer and opposee, will demonstrate different strategies for influencing their partner.

Qualitative, descriptive information is provided to evaluate this hypothesis. This evaluation consisted of examining (a) which speech acts each of the dyad members opposed; and (b) the conflict initiating moves used by the intellectually disabled students and those used by the normal-progress students.

Speech Act of the Utterance Opposed

Table 23 indicates which speech acts each of the student types opposed. The results were as follows. First, consider those 135 conflicts for which the normal-progress student assumed the role of opposer (the intellectually disabled student thus was the opposee). Oppositions were initiated by the normal-progress student in the following manner: 91 of the 135 conflicts (67.41%) were in response to the partner's "requests for action"; 24 (17.78%) were in response to "statements of intent"; while 20 (14.81%) were in response to "statements of fact". Next, consider the remaining 76 conflicts. In these disputes, the intellectually disabled student was the opposer (the normal-progress student thus was the opposee). Oppositions were initiated as follows: 55 of the 76 conflicts (72.36%) were in response to "requests for action", 9 (11.84%) were in response to "statements of intent", and 12 (15.79%) were in response to "statements of fact". Neither student type opposed a "request for permission". While the relative frequencies for the normal-progress and intellectually disabled students may appear to be somewhat similar for each of the speech acts, the intellectually disabled students were more inclined to oppose "requests for action" than the normal-progress students. Also, the intellectually disabled students were a little less likely to oppose "statements of

Table 23: Speech Act of the Utterance Opposed, by Initiator of the Disagreement

	Initiator: Normal - Progress		Initiator: Intellectually Disabled		Total	
Speech Act	Frequency	%	Frequency	%	Frequency	%
Request for Action	91	67.41%	55	72.36%	146	69.19%
Statement of Intent	24	17.78%	9	11.84%	33	15.64%
Statement of Fact	20	14.81%	12	15.79%	32	15.16%
Request for Permission	0	0%	0	0%	0	0%
Total	135	100%	76	100%	211	100%

intent". The rank ordering of the speech acts opposed by the normal-progress students was: 1 - "requests for action", 2 - "statements of intent", and 3 - "statements of fact". The rank ordering of the speech acts opposed by the intellectually disabled students was different: 1 - "requests for action"; 2 - "statements of fact"; and, 3 - "statements of intent". This discrepancy in the rank ordering suggests that there may be some differences between intellectually disabled and normal-progress students when each of the student types occupy the role of opposer during a verbal conflict.

Tables 24 and 25 indicate the types of speech acts opposed, by initiator of the disagreement, controlling for gender (Table 24 for females, Table 25 for males). Table 24 shows that the intellectually disabled females opposed "requests for action" 9.23% more often than did the normal-progress females. Furthermore, the intellectually disabled females were less apt to oppose "statements of intent" and "statements of fact" than were the normal-progress females. For example, the intellectually disabled females opposed "statements of intent" 14.71% of the time whereas the normal-progress females opposed "statements of intent" 18.97% of the time. Table 25 indicates that the intellectually disabled males opposed "requests for action " only at a marginally greater rate than did the normal-progress males (69.05% versus 67.53%). This means that the intellectually disabled males and the intellectually disabled females differed in the extent to which they opposed "requests for action". The intellectually disabled males, according to Table 25, more frequently opposed "statements of fact" than did the intellectually disabled females (21.43% for the intellectually disabled males versus

Table 24: Speech Act of the Utterance Opposed, by Initiator of the Disagreement (Female Dyads)

	Initiator: Normal - Progress		Initiator: Intellectually Disabled	
Speech Act	Frequency	%	Frequency	%
Request for Action	39	67.24%	26	76.47%
Statement of Intent	11	18.97%	5	14.71%
Statement of Fact	8	13.79%	3	8.82%
Request for Permission	0	0%	0	0%
Total	58	100%	34	100%

Table 25: Speech Act of the Utterance Opposed, by Initiator of the Disagreement (Male Dyads)

	Initiator: Normal - Progress		Initiator: Intellectually Disabled	
Speech Act	Frequency	%	Frequency	%
Request for Action	52	67.53%	29	69.05%
Statement of Intent	13	16.88%	4	9.52%
Statement of Fact	12	15.58%	9	21.43%
Request for Permission	0	0%	0	0%
Total	77	100%	42	100%

8.82% for the females). In addition, the intellectually disabled males less frequently opposed "statements of intent" than did the intellectually disabled females (9.52% versus 14.71% respectively). The normal-progress males and the normal-progress females exhibited similar performance overall when compared to one another on the speech acts opposed. Inspection of Tables 25 and 26 reveals that the four types of speech acts were opposed at similar rates by the normal-progress males and females. That is, there was no evidence that the normal-progress males and the normal-progress females differed significantly on any dimension.

Conflict Initiating Moves

Inspection of Table 26 reveals clear differences in the conflict initiation strategies used by the intellectually disabled participants and by the normal-progress participants when assuming the role of opposer. "Simple no" and "indirect no" were used by the intellectually disabled students at relatively higher rates than by the normal-progress students (11.84% vs. 8.15% for "simple no"; 14.47% vs. 5.19% for "indirect no"). In addition, when initiating conflicts, the intellectually disabled adolescents proposed an alternative more often than did the normal-progress students (35.53% vs. 31.85%).

All other conflict initiation moves ("justification", "delay/distraction", and "question/challenge") were employed with a relatively higher frequency by normal-progress peers. The normal-progress students used a "justification" as a conflict initiating move 28.00% of the time. The intellectually disabled students gave a

Table 26: Initial Opposition Strategies used by Normal-Progress and by Intellectually Disabled Adolescents

	Initiator: Normal - Progress		Initiator: Intellectually Disabled		Total	
Opposition Strategy	Frequency	%	Frequency	%	Frequency	%
Simple No	11	8.15%	9	11.84%	20	9.48%
Indirect No	7	5.19%	11	14.47%	18	8.53%
Justification	27	20.00%	12	15.79%	39	18.48%
Alternative	43	31.85%	27	35.53%	70	33.18%
Delay/Distract	16	11.85%	8	10.53%	24	11.37%
Question/ Challenge	31	22.96%	9	11.84%	40	18.96%
Total	135	100%	76	100%	211	100%

"justification" as a conflict initiation move only 15.79% of the time. Similarly, the normal-progress students used a "question/challenge" 22.96% of the time when initiating a conflict, whereas the intellectually disabled students used it only 11.84% of the time. A "delay/distraction" was used for 11.85% of conflicts that the normal-progress students initiated. The intellectually disabled students used the "delay/distraction" conflict initiating move for 10.53% of their conflicts.

Therefore, there were obvious differences between the normal-progress students and the intellectually disabled students for conflict initiating moves. That is, the "simple no", "indirect no", and "alternative" were used by the intellectually disabled students at relatively higher rates then by their normal-progress peers. All other conflict initiating moves ("justification", "delay/distraction", and "question/challenge") were employed with a relatively higher frequency by the normal-progress students.

Tables 27 and 28 present the conflict initiating moves used by the female and by the male participants. Consider first the females (Table 27). The higher level conflict initiating moves ("justification", "delay/distraction", and "question/challenge") were used relatively more frequently by the normal-progress females than by the intellectually disabled females. The "alternative" conflict initiating move was used more often by the intellectually disabled females, however. Next, consider the males (Table 28). For the males, the higher level conflict initiation moves ("justification", "alternative", "delay/distraction", and

Table 27 Initial Opposition Strategies used by Normal-Progress and by Intellectually Disabled Females

	Initiator: Normal-Progress		Initiator: Intellectually Disabled	
Opposition Strategy	Frequency	%	Frequency	%
Simple No	4	6.90%	2	5.88%
Indirect No	4	6.90%	6	17.65%
Justification	9	15.52%	4	11.76%
Alternative	18	31.03%	15	44.12%
Delay/Distract	8	13.79%	5	14.71%
Question/Challenge	15	25.86%	2	5.88%
Total	58	100%	34	100%

Table 28 Initial Opposition Strategies used by Normal-Progress and by Intellectually Disabled Males

	Initiator: Normal-Progress		Initiator: Intellectually Disabled	
Opposition Strategy	Frequency	%	Frequency	%
Simple No	7	9.09%	7	16.67%
Indirect No	3	3.90%	5	11.90%
Justification	18	23.38%	8	19.05%
Alternative	25	32.47%	12	28.57%
Delay/Distract	8	10.39%	3	7.14%
Question/Challenge	16	20.78%	7	16.67%
Total	77	100%	42	100%

"question/challenge") were used relatively more frequently by the normal-progress students. This was particularly so for the "question/challenge" move.

Examination of (a) the "speech acts of the utterance opposed"; and (b) the "conflict initiating moves" above leads to the following conclusion regarding hypothesis 4. Students, when occupying the roles of Opposer and Opposee, do demonstrate different strategies for influencing their partner.

5. ***Reciprocity of Negative Affect.***

The following hypothesis was examined:

In disagreements where negative affect is present, it will be demonstrated by both the opposer and opposee. That is, where negative affect is present, more than 50 per cent of the time it will be demonstrated by both members of the dyad.

This hypothesis was tested at the 0.05 level of significance.

Dyads with conflicts where negative affect was present were identified ($\underline{n} = 11$). (That is, negative affect was not demonstrated for all of the dyads.) For each of these 11 dyads, every verbal conflict where negative affect occurred was identified. The percentage of conflicts where the opposer only or the opposee only exhibited negative affect, and those where both students exhibited negative affect were computed. A Wilcoxon Signed Ranks test was performed (Sign Rank = -22, *p*-value = .0479). This confirmed that in verbal disagreements where negative affect was present, it was demonstrated by both participants in the disagreement.

6. "Simple No" as an Initiating Conflict Move.

The following hypothesis was examined:

When the initial opposition consists of a "simple no", conflicts will be continued beyond the turn containing the "no" response.

This hypothesis was examined at the 0.05 level of significance.

Fifteen of the 25 dyads employed the "simple no" conflict initiating move. The total number of "simple no" conflicts for each of these 15 dyads was computed. Then, those conflicts which began with the "simple no" oppositional move and extended beyond a single conversational turn were identified. For each of these 15 dyads, the conflicts starting with the "simple no" and continuing beyond a single turn were expressed as a percentage of the total number of all "simple no" conflicts (that is, single turn "simple no" conflicts plus longer "simple no" conflicts). A Wilcoxon Signed Ranks test (Sign Rank = -9, *p*-value = .70) showed nonsignificant results. Hence, the study failed to confirm that conflicts with a "simple no" initial oppositional move would be continued beyond the turn containing the "no" response. The *p*-value of .70 suggests that there was no strong evidence in either direction. That is, there was no evidence to suggest that conflicts beginning with the "simple no" were brief conflicts either.

7. Explanations as an Initial Opposition.

This hypothesis proposed that:

Conflict length would be shorter when the initial opposition contained an "alternative", or contained a "justification" as a conflict initiation strategy. That is, "justifications" and "alternatives" as an initial opposition are more likely to lead to a termination of the conflict episode.

The "explanations as an initial opposition" hypothesis was examined at the 0.05 level of significance.

The six coded "initial opposition moves" were categorized as three basic types: type 1 - "justifications"; type 2 - "alternatives"; and type 3 - all "other" strategies of initial opposition. Table 25 depicts the mean conflict length for each of these three types of initial opposition moves. (See Table G-1 and Table G-2 in Appendix G for raw data regarding the conflict length for each of the six "initial opposition moves"). For each dyad, the conflict lengths of those episodes where a "justification" (type 1) was used as the initial move was compared with the conflict length of those episodes where an "alternative" (type 2) was used and compared with the conflict length where none of the previous two types of conflict initiating strategies were employed (that is, the "other" category, type 3). Dyads in which all three categories of the conflict initiating moves were present were then identified and selected ($\underline{n} = 14$). That is, 14 dyads used types 1, 2, and 3 of the initial opposition strategies described above. The null hypothesis specified that the mean conflict length for the three types of the initial opposition strategies would be equal. The research hypothesis stated that the mean conflict length for "justifications" would be less than the "other" types; and the mean conflict length

for "alternatives" would be less than "other" types. Friedman's nonparametric test for paired data was used to test this hypothesis.

There were 35 instances of "justifications" (type 1) as a conflict initiating move. The average conflict length in conversational turns for the "justifications" type of move was 2.00 (standard deviation = 1.99). In all, 58 conflicts had an "alternative" (type 2) as the conflict initiating move. The mean conflict length in "number of turns" for the "alternative" type was 2.41 (standard deviation = 1.97). The remaining 72 verbal disagreements employed "other" (type 3) conflict initiating moves. The mean conflict length for the initiating move type "other" was 2.16 (standard deviation = 1.92). Friedman's nonparametric test for paired data showed significance, ($F_{2,26} = 4.71$, p-value = .018). Hence, the null hypothesis that the three categories of conflict initiating moves have similar conflict lengths was rejected.

Multiple Comparisons

Follow-up multiple comparisons were performed to explore where the differences in conflict length were located. Multiple comparisons were tested statistically using the Bonferroni adjustment to control the experiment-wise error rate (Maxwell & Delaney, 1990). That is, for each of the two planned contrasts ("justifications" versus "other"; and "alternatives" versus "other"), the obtained p-value was compared to .05/2 = .025, in order to assess the statistical significance of the contrast. A marginally statistically nonsignificant difference between the conflict length for "justification" and "other" was identified (p-value = .0316). A

nonsignificant result was also obtained for the difference in conflict length between the "alternative" and the "other" conflict initiating strategies (p-value = .5218).

Table 29 indicates that "justification" as a conflict initiating move resulted in borderline shorter conflict length than the "other" conflict initiating strategy categories. "Justifications" were marginally more likely to lead to the termination of a conflict episode. This, however, was not so for the "alternative" conflict initiation move type. For example, note the mean difference in conflict length for the "justification" and "other" conflict initiation strategies (2.00 conversational turns versus 2.17 turns respectively). Table 29 suggests that the conflict length is longer for "alternatives" than for the "other" conflict initiation strategies (2.41 turns versus 2.17 turns, respectively).

8. Submission by Intellectually Disabled Students and by Peers.

The following hypothesis was examined:

In disagreements during learning engagements, the intellectually disabled student will submit more frequently than the normal-progress peer.

This hypothesis was tested at the 0.05 level of significance.

Those dyads in which both conflict outcomes (that is, the intellectually disabled student submitted or the normal-progress student submitted) existed were isolated. For each dyad in which this was the case ($\underline{n} = 24$), the percentage of conflicts when the intellectually disabled student submitted was computed. The null hypothesis that this proportion would be less than or equal to 0.5 was tested against the research hypothesis that the proportion of instances in which the intellectually

Table 29: Number of Conversational Turns for Three Categories of Conflict Initiation Move (Justification, Alternative, Other)

		Conversational Turns			
Initiation Move Category	n	M	SD	Minimum	Maximum
Justification	35	2.00	1.99	1.00	10.00
Alternative	58	2.41	1.97	1.00	8.00
Other[a]	72	2.17	1.92	1.00	15.00

[a]Includes Simple No; Indirect No, Delay/Distraction, and Question/Challenge.

disabled student submitted would exceed 0.5. The nonparametric Wilcoxon Signed Ranks test (Wilcoxon, 1945) was administered (Sign Rank = 39, *p*-value = .0893), hence, failing to reject the null hypothesis. It cannot be concluded that the intellectually disabled student submitted more frequently than the normal-progress peer. Note that the result of this statistical test was marginally nonsignificant.

9. Standoff as a Conflict Outcome.

The following hypothesis was examined.

"Standoff" will be a prevalent conflict outcome.

Descriptive, qualitative data was used to explore and evaluate this hypothesis.

Four conflict outcomes were coded by the adaptation of Eisenberg's (1992) analysis scheme: "intellectually disabled student submits", "normal-progress student submits", "standoff", and "compromise". "Standoff" was the conflict outcome for 44 of the 211 conflicts that arose during the learning task. This represented 20.85% of the verbal conflicts. Referring back to Table 18, note that submissions were more prevalent than "standoff" as conflict outcomes. The normal student submitted in 31.28% of the disagreements while the intellectually disabled student submitted in 41.71% of the verbal dissension episodes. In all, "submission" was evidenced 72.99% of the time in disputes which arose during the Fort Walsh learning engagement. The least frequent outcome of the verbal disagreements was "compromise" (occurring in only 6.16% of the disputes). In conclusion, "standoff" was not a prevalent conflict outcome in this learning task.

That is, we fail to conclude that "standoff" would be a prevalent conflict outcome. This was true for male and female participants alike. Referring back to Table 21, for female dyads, "standoff" was the outcome for 19.57% (18 of 92) of the verbal conflicts. For male dyads, "standoff" was the outcome for 21.85% (26 of 119) of the verbal conflicts.

10. The Last Verbal Oppositional Turn.

The following hypothesis was examined:

The normal-progress student will take the last verbal oppositional turn significantly more often than the intellectually disabled learner.

This hypothesis was tested at the 0.05 level of significance.

For each dyad ($\underline{n}$ = 25), the percentage of conflicts in which the intellectually disabled student took the last conversational turn was computed. The null hypothesis that this proportion would equal or exceed 0.5 was tested against the alternative hypothesis that this proportion would be less than 0.5. The Wilcoxon Signed Ranks test (Wilcoxon, 1945) was performed (Sign Rank = -50, p-value = .0784, for the one-tailed test). This result was marginally nonsignificant. Therefore, we fail to conclude that the normal-progress student would take the last verbal oppositional turn significantly more often than the intellectually disabled student during verbal disagreements.

11. Compliance Exchanges versus Mutual Opposition.

The following hypothesis was examined:

There will be evidence of compliance episodes (oppositional moves made by the normal-progress student that are not pursued by the intellectually disabled student).

A qualitative, descriptive analysis was conducted to evaluate this hypothesis.

All of the single-turn conflicts were identified. These are depicted in Table 11. In all, 102 of the 211 total conflict episodes were single-turn conflicts ("compliance exchanges"). That is, nearly half (48.34%) of the verbal disagreements during the learning task were "compliance exchanges". Table 11 indicates that 63 (61.76%) of these 102 single-turn conflicts were initiated by the normal-progress peers and were not pursued by the intellectually disabled partners. By comparison, 39 of the 102 single-turn conflicts (38.24%) were initiated by the intellectually disabled adolescent and were not pursued by the normal-progress student. Overall, there was evidence of compliance episodes (oppositional moves made by the normal-progress student that were not pursued by the intellectually disabled student).

In order to interpret this result, it is important to consider Table 13 and Table 11 together. Table 13 indicates that the normal-progress student initiated 63.98% of all disputes while the intellectually disabled initiated only 36.02% of all disputes. These figures almost parallel the rates for "compliance exchanges" shown in Table 11. That is, these values parallel the figures for overall conflict rate. In

conclusion, there was insufficient evidence that the relative frequency of single turn "compliance exchanges" was greater for the intellectually disabled participants.

12. Mitigation.

The following hypothesis was examined:

Normal-progress peers will use the less direct question/challenge conflict initiating move significantly more frequently than their intellectually disabled counterparts.

This hypothesis was tested at the 0.05 level of significance.

Dyads in which the question/challenge conflict initiation move existed were identified ($\underline{n} = 21$). For each of these 21 dyads, the number of conflicts in which the intellectually disabled student employed the "question/challenge" conflict initiating move was expressed as a percentage of the total number of conflicts in which the "question/challenge" strategy was used. The null hypothesis that the proportion of conflicts in which the intellectually disabled student used this strategy would equal or exceed 0.5 was tested against the alternative hypothesis that the proportion with which the intellectually disabled used the strategy would be less than 0.5. A nonparametric Wilcoxon Signed Ranks test (Wilcoxon, 1945) was conducted (Sign Rank = -105, p-value = .0001), yielding a highly significant result. Hence, the null hypothesis was rejected. One therefore can conclude that the proportion of conflicts in which the intellectually disabled student used the conflict mitigating "question/challenge" strategy was significantly less than 0.5.

That is, the "question/challenge" conflict initiating strategy was used significantly more often by the normal-progress than by the intellectually disabled counterparts.

CHAPTER V

DISCUSSION

The two broad objectives of the present study were:

1. To describe the pragmatic and general language profiles of the participants, (with a special interest in portraying the language abilities of mainstreamed adolescents with mild intellectual disabilities); and
2. To identify the conversational strategies that adolescents with mild intellectual disabilities demonstrate when negotiating solutions during a problem-solving task.

The language evaluation findings are discussed first as they aid in the interpretation of the conversational strategies used during conflict negotiation.

Language Evaluation Findings

Two formal language tests were administered to all participants. These were: (a) a pragmatic language measure, the Test of Pragmatic Language (TOPL) (Phelps-Terasaki & Phelps-Gunn, 1992); and (b) a general language measure, the Test of Adolescent and Adult Language (3rd ed.) (TOAL-3) (Hammill et al., 1994).

Test of Pragmatic Language (TOPL)

Administration of the Test of Pragmatic Language (TOPL) (Phelps-Terasaki & Phelps-Gunn, 1992) appeared to confirm the effectiveness of the teacher nomination procedure for selection of the subject sample. (The teacher nomination procedure will be discussed further in the next section). The two groups of participants, namely the normal-

progress peers and the students with mild intellectual disabilities, performed quite differently on the TOPL. This difference in performance was best evidenced by the mean *delay* exhibited by each subject group.

The administration of the Test of Pragmatic Language (TOPL) (Phelps-Terasaki & Phelps-Gunn, 1992) generally confirmed the existence of: (a) normal pragmatic language ability for the normal-progress group; and (b) delayed or impaired pragmatic language development for the mildly intellectually disabled group. This latter result means that adolescents with mild intellectual disabilities demonstrate pragmatic language deficiencies. These pragmatic language deficits may impede intellectually disabled students' ability to participate in social exchanges such as conflicts.

In verbal conflicts, the participants respond to the speech acts and the conflict initiating moves of their partner. They also need to justify their position through the provision of explanations. The verbal exchanges which take place during conflicts are accomplished in a brief amount of time and require the ongoing processing of social-communicative language. As language is the tool by which conflicts are negotiated, this finding must be considered in relationship to conflict negotiation.

To conclude, it is apparent that mildly intellectually disabled adolescents demonstrate pragmatic language impairments which could impede their social interactions and influence their ability to participate in verbal conflict exchanges.

Test of Adolescent and Adult Language (3rd ed.) (TOAL-3)

Teacher Nomination Procedure

The teacher nomination procedure used for selection of the subject sample resulted in students with general language quotients which appeared to be representative of the populations of interest. That is, the mean Test of Adolescent and Adult Language (3rd ed.) (TOAL-3) (Hammill et al., 1994) *total quotients* attained by the two groups, the mildly intellectually disabled group and the normal-progress group, appeared consistent with the general language performance that one might expect for these two populations. The normal-progress students attained a mean TOAL-3 *total quotient* consistent with "average" general language ability. The mildly intellectually disabled students attained a mean TOAL-3 *total quotient* which appeared consistent with a designation of "mild" mental retardation. Therefore, in this study, the teacher nomination procedure appeared to be a viable method for accessing the populations of interest. Evidence to support this statement follows.

Normal-Progress Peers

On the Test of Adolescent and Adult Language (3rd ed.) (TOAL-3) (Hammill et al., 1994), the mean TOAL-3 *total quotient* for the normal-progress students was rated as "average". Furthermore, "average" performance by students in the normal-progress group overall was evidenced for: language *modes* (*listening*, *speaking*, *reading*, and *writing*); language *forms* (*spoken* and *written*); language *features* (*vocabulary* and *grammar*); and, language *systems* (*receptive* and *expressive*).

In the present study, on the Test of Adolescent and Adult Language (3rd ed.) (TOAL-3) (Hammill et al., 1994), some of the normal-progress students did not perform well. These students demonstrated "poor" or "very poor" general language skills, as defined by the TOAL-3 examiner's manual. Three normal-progress students exhibited "poor" general language performance (TOAL-3 *total quotients* falling within the 70 - 79 band). One normal-progress student exhibited "very poor" general language performance (TOAL-3 *total quotient* falling within the "very poor" category). There are a number of possible explanations for these lower language scores attained by some of the normal-progress peers. First, the students were informed that their test results did not count for their report card and would not be reported in any way to the school authorities or to their parents. Therefore, there may have been a motivational aspect that affected these students' participation during the language testing procedures. Secondly, this result could be related to the phenomenon of under identification of children with learning problems. Mercer (1971, cited in MacMillian, Meyers, & Morrison, 1980) found that of 1,298 children in regular classes who had never been referred for the purpose of service delivery, 126 would qualify for placement in EMR (educable mentally retarded) programs (that is, demonstrating mild mental retardation).

Intellectually Disabled Students

The intellectually disabled group attained a mean *total quotient* on the Test of Adolescent and Adult Language (3rd ed.) (TOAL-3) (Hammill et al., 1994) which was indicative of "very poor" performance. This group exhibited language abilities in the *speaking*, *reading*, and *writing* modes which overall were rated as "very poor".

Performance in the *listening* mode was better than the performance in the *speaking*, *reading*, and *writing* modes. The intellectually disabled group in fact was rated one level higher in the *listening* mode (rating = "poor"). Mildly intellectually disabled adolescents' listening skills therefore may be an area of relative strength compared to *speaking*, *reading*, and *writing* areas. Another explanation is that this may be indicative of their true language potential. That is, with intervention, these students' skills in the *speaking*, *reading*, and *writing* modes perhaps could be brought up to their *listening* level. The other implication is that the *listening* mode may be an optimal mode for instructing mildly intellectually disabled students, as it is an area of comparative strength.

Deficits in language *forms* (*spoken* and *written*), *features* (*vocabulary* and *grammar*), and *systems* (*receptive* and *expressive*) were evidenced by the intellectually disabled students' performance on the Test of Adolescent and Adult Language (3rd ed.) (TOAL-3) (Hammill et al., 1994). In all, the mildly intellectually disabled group performed more poorly than their normal-progress counterparts on the TOAL-3. These language deficits may account for the observed performance differences of the intellectually disabled students when negotiating verbal disagreements during the problem-solving task. That is, impairments in general language performance may impede the intellectually disabled adolescents' performance during the negotiation of verbal conflicts.

In summary, the hypothesis that mildly intellectually disabled students would demonstrate a general language deficit was confirmed. The scores that these students achieved on the Test of Adolescent and Adult Language (3rd ed.) (TOAL-3) were clearly indicative of a general linguistic impairment. This general language deficit could impede

the social interactions of students with mild intellectual disabilities and influence their ability to participate in verbal dissension episodes.

Overall, the female intellectually disabled students performed more poorly than the male intellectually disabled students on the general language measure. This was reflected in the *total quotients* that they attained on the Test of Adolescent and Adult Language (3rd ed.) (TOAL-3) (Hammill et al., 1994). This difference in performance raises the question of whether females are under-identified for special education services. In addition, this performance discrepancy could account for the male–female differences evident in the results obtained for the learning task (the second objective of the investigation). One could also propose that the learning task used for the study may have been more appealing to male than to female students, as many of the characters and activities in the learning task were male oriented. Finally, there actually could be differences in the ways that male and female students negotiate verbal disagreements which could account for the differences noted. Further investigation of the relationship between general language performance and performance during verbal conflicts clearly is warranted.

Strategies for Negotiating Verbal Disagreements – Findings

Deficits in pragmatic language performance and in general language performance clearly may influence the ability of the intellectually disabled students to negotiate successfully during conflict episodes. The aforementioned language evaluation findings indicate deficits in both pragmatic and general language performance. These deficits may

underlie the differences in conflict negotiation demonstrated by mildly intellectually disabled students.

The present study examined a number of hypotheses about the initiation, maintenance, and resolution of verbal disagreements between mildly intellectually disabled and normal-progress adolescents. The primary purpose of this study was to examine and describe the nature of the verbal disagreements that intellectually disabled students engage in with normal-progress peers. In this study, the dyad was chosen as the basic unit of analysis as understanding conflict at the dyadic level was deemed to be an essential step prior to the examination of multi-party conflicts. The findings obtained for this dyadic level analysis: (a) illuminate our understanding of the verbal disagreements of intellectually disabled students; and (b) provide direction for future research endeavors. These findings now are reviewed.

Number of Conflicts

In this study, the female dyads demonstrated an overall conflict rate which was lower than that exhibited by the male dyads. The lower general language scores attained by the female intellectually disabled students may explain this finding. Also, the learning activity may have been more appealing to males. Females may be socialized to be more cooperative and agreeable (Bretherton, Allard, & Collins, 1994). This could explain the male–female difference in conflict rate. Also, other researchers have noted that boys were involved in conflict more often than girls (Miller, Danaher, & Forbes, 1986).

Overall, it is difficult to comment on the number of verbal conflicts that arose during the learning engagement. There are inherent problems when comparing the conflict

rate for this study with the rates found by other investigators. Although several studies (Eisenberg, 1992; Garton & Renshaw, 1988; Inder & Todd, 1993) provide data on conflict rate, these studies employed: (a) a dyad or group composition which differed from that used in the present study according to age and identity; (b) different tasks; and/or, (c) a different definition of conflict than that used in the present investigation. Hence, the empirical literature on conflict rate is of limited applicability to the present investigation.

Conflict Length

There were no apparent gender differences with respect to conflict length. Overall, the vast majority of conflicts which arose during the learning activity were less than four conversational turns in length. This finding highlighted the importance of using a "verbal conflict" definition which identifies these brief conflict episodes as well as longer conflicts. A definition that encompasses the full range of verbal conflict lengths is essential for advancing knowledge about the verbal dissension episodes in which mildly intellectually disabled students engage. Hewitt et al. (1993), in their study of the verbal conflicts among adults with mental retardation, employed a conflict definition which placed constraints on the length of conflicts. Specifically, these authors studied only those verbal conflicts which extended for at least four turns. In 13 taping sessions (1½ to 4-hour visits), Hewitt et al. (1993) identified only 22 instances of verbal conflict for analysis.

In the present study, no verbal conflict extended beyond 15 conversational turns in length. In fact, only one verbal conflict was more than 10 turns. By contrast, Hewitt et al. (1993), reported that 20 of the 22 verbal conflicts that they analyzed lasted for more than

10 conversational turns. Hewitt et al.'s (1993) investigation was conducted at a group home. Since all but three conflicts at the group home were multi-party, the longer conflict length noted by Hewitt et al. (1993) could be a feature of polyadic verbal conflict. That is, one reason why conflicts in the present study were shorter than those noted by Hewitt et al. (1993) is that this was a study of dyadic conflict. Other possible reasons are: (a) the nature of the task; (b) the constant presence of a normal-progress peer; (c) the younger age of the participants; and, (d) the higher general intellectual functioning in the current study. In Hewitt et al.'s (1993) study, only 4 of the 10 group home residents were at the "mild – moderate" level of mental retardation. Further exploration of the conflict length of adolescents who are mildly intellectually disabled is warranted.

Conflict Length by Conflict Initiator

In this study, longer "mutual" verbal disagreements were more prevalent when the normal-progress peer initiated the disagreement than when the intellectually disabled student initiated the disagreement. This finding suggested that: (a) the conflict initiation moves employed by normal-progress peers actually extended disagreements by prompting further discussion; (b) the normal-progress students initiated disagreements about topics/issues that required extended discussion; or (c) the intellectually disabled students responded to the conflict initiation moves of normal-progress peers in such a way that the normal-progress peers felt a need to continue discussing the issue at hand.

Explicit Negative

While one might expect that verbal conflicts might be signaled overtly with an explicit "no", the present study disconfirmed this. Only about 15% of the verbal conflicts arising during the learning task were signaled in this way. The mildly intellectually disabled adolescents and the normal-progress peers used the explicit "no" at very similar rates. Hence, there appeared to be little evidence of a difference between the intellectually disabled students and the normal-progress students on this verbal response.

The explicit "no" was used in verbal conflicts between mothers and their preschoolers at higher rates than in the present investigation, according to Eisenberg (1992). Mothers used explicit "no" 56% of the time while the preschoolers used it 60% of the time. Therefore, a number of explanations for the difference can be entertained: (a) the use of explicit "no" could be a feature of authority–child relationships; (b) explicit "no" may be particularly prevalent early in development and dissipate at later stages; and, (c) a lower rate of explicit "no" may be a feature of learning engagements (as compared to the use of explicit "no" in other types of activities).

Speech Act

Conflicts were initiated by the normal-progress students and by the intellectually disabled students in response to: "requests for action", "statements of intent", and "statements of fact". For intellectually disabled and normal-progress students alike, the vast majority of conflicts (approximately 70%) were in response to the "request for action". "In any directive act a speaker risks infringing on another's preserve" (Garvey, 1984, p. 113). In fact, Garvey asserted that "it is the request for action (RA) or behavioral

request, that is perhaps the most ritually sensitive type" (p. 114) of directive speech acts. Therefore, it is not surprising to note in the current investigation that the vast majority of verbal disagreements arose in response to a "request for action".

The intellectually disabled females exhibited a higher rate of conflict in response to their partners' "requests for action" than did the intellectually disabled males. While this may be a male–female difference, it also could be accounted for by the lower general language performance of the females. Perhaps students with lower language scores more readily perceive a "request for action" as an arguable event than, for example, a "statement of intent". Future studies may illuminate this.

The "request for action" (requesting another person to take a particular course of action) precipitates verbal dissension episodes. Quiet children and withdrawn "failure-accepting" students (Covington, 1993) may emit fewer "requests for action" because they have simply chosen not to participate in what they perceive to be a useless contest" (p. 65). If so, this lack of participation may reduce "failure-accepting" students' opportunities for verbal disagreements. Yet, these conflicts are essential for students' intellectual (Piaget, 1932), moral (Kohlberg, Colby, Gibbs, Speicher-Dubin, & Power, 1978), and social (Selman, 1980) growth. Since the "request for action" seems to precipitate disagreements, it may be important to distinguish and isolate the various types of "requests for action". It may be interesting to further subdivide and categorize the "requests for action" using Garvey's (1984) hierarchy of "direct" to "indirect" forms. Perhaps it could be established if "direct" versus "indirect" forms of the "request for action" result in different responses from the conversational partner. This may be a goal for future

research. Secondary re-analysis of the existing data set may demonstrate differences of this type.

The intellectually disabled students were less inclined to oppose normal-progress students' "statements of intent" than the reverse. The intellectually disabled students disputed "statements of fact" at a marginally higher rate than their normal-progress peers. No "requests for permission" were opposed by the intellectually disabled students or by the normal-progress students.

A difference in the rank ordering of speech acts opposed by the normal-progress and intellectually disabled students was detected. The rank ordering of the speech acts opposed by the normal-progress students was: 1 - "requests for action", 2 - "statements of intent", and 3 - "statements of fact". The rank ordering of the speech acts opposed by the intellectually disabled students was different: 1 - "requests for action"; 2 - "statements of fact"; and, 3 - "statements of intent". Future studies should be attuned to this difference and continue to explore the ways in which intellectually disabled students and normal-progress students respond to their partners' "statements of fact" and "statements of intent". The difference also raises some questions: Is there a difference because normal-progress and intellectually disabled students respond to their partner's speech acts differently; or, is there a difference in the rates the various types of speech acts are emitted by the two groups?

Conflict Initiator

In this study, verbal conflicts were initiated by the normal-progress students nearly twice as often as by the intellectually disabled students. The lower rate of conflict

initiation by the students with intellectual disabilities may reflect the adaptive limitations of individuals with intellectual disabilities. That is, their lower rate of conflict initiation may be a manifestation of their limitations in social intelligence. According to Greenspan (1979, 1981), individuals with intellectual disabilities may have limitations in the ability to demonstrate appropriate "judgment in their interpersonal behaviors and in the ability to communicate their own thoughts and feelings in solving problems when conflicting needs exist in social situations"(AAMR, 1992, p. 15).

Being hesitant to initiate conflict possibly could indicate that the intellectually disabled student views the normal-progress peer as having greater authority. However, Garton and Renshaw (1988) in their examination of disputes between younger normal students during a dyadic learning task, also observed that "one child dissents about twice as often as the other" (p. 280). Hence, this phenomenon may be typical of learning tasks in general. Despite this finding, it is noteworthy that the normal-progress students initiated verbal dissension episodes about twice as often as did the intellectually disabled students. This means that the intellectually disabled students experience the role of respondent (or "opposee") more frequently than the role of initiator (or "opposer") during verbal disagreements. One can also speculate that if intellectually disabled students are paired with other intellectually disabled students during learning tasks, the overall rate of conflicts may be substantially less than when paired with a normal-progress peer. This speculation, if found to be true, would lead to the argument that one effect of mainstreaming may be that intellectually disabled students experience verbal disagreements more often, albeit primarily in the respondent role.

The fact that intellectually disabled students initiate conflicts considerably less frequently than normal-progress students is troubling. If the conflict initiation rate of the intellectually disabled students remains substantially lower than that of their normal-progress peers, their behavior prevents them from engaging in the exchange of ideas that promotes intellectual development. This is even more of a concern, when one considers the area of moral development, as theoreticians have linked the development of moral reasoning to social conflict. Kohlberg (1981), for example, believed that "moral development arises from social interactions in situations of social conflict" (p. 54). In other words, the posing of real or hypothetical dilemmas to students in such a way as to arouse disagreement and uncertainty as to what is right, stimulates moral stage growth. Intellectually disabled students may miss out on important opportunities to promote and enhance their moral growth, by failing to participate in social conflicts which can act as a catalyst for growth. Maynard (1985b) stated that "disputes and arguments among peers represent a way that children acquire a sense of social structure" (p. 207). Therefore, a lower overall rate of conflict initiation by intellectually disabled adolescents may have implications for the acquisition of this sense of social structure. It also may impede the development of their ability to understand and resolve conflicts within friendships. Lyles (1996) noted that intellectually disabled students demonstrated deficits in this area.

The present analysis showed that verbal disagreements in the classroom follow a pattern. One student appeared to predominate over the other in terms of the initiation of conflict. This was noted in a previous study by Garton and Renshaw (1988). In the present study, there appeared to be a status-organizing process during verbal

disagreements, whereby most of the disagreements were initiated by the normal-progress partner. Sabsay and Platt (1985b) suggested that nondisabled interlocutors may control interactions with intellectually disabled speakers. This imbalance in the conflict initiation rate also may reflect the position of normal-progress students in the "dominance hierarchy" (Strayer & Strayer, 1976). Guralnick (1986) offered this view, stating:

> Although coequal interactions seem to be the rule for most children, many dyadic exchanges are characterized by dominance by one member of the pair. A child's developmental status and or chronological age (Guralnick & Paul-Brown; Lougee et al., 1977) are two of the factors which govern the extent of this asymmetry (p. 107).

In the present study there were, however, some dyads in which the intellectually disabled student predominated over the normal-progress peer in terms of conflict initiation. Therefore, one could ask the question if verbally active students initiate conflicts more frequently than the less verbally active member of the dyad. A secondary re-analysis of the data may offer some insight into this question.

If normal-progress students predominate over the intellectually disabled students in most social conflict exchanges, this may be problematic. Piaget (1959) suggested that equality of status promotes intellectual cooperation and comparison of divergent viewpoints. According to Eisenberg (1987), children are as likely to oppose or be opposed in conflicts with their peers. Hartup (1978) underscored the importance of egalitarian experiences for enhancement of conceptual advances, for communication development, and socialization. Egalitarian experiences may be essential.

Initial Opposition Moves

A number of initial opposition moves were coded in the present study: simple "no", indirect no, justification, alternative, delay/distraction, and question/challenge. The simple "no" did not result in conflict continuation, as was proposed. Scholars have suggested that certain initial opposition strategies may be strategic for resolving conflicts. For example, Sherman et al. (1992) and Hewitt et al. (1993) proposed that giving a reason was an important verbal skill for conflict resolution. Hence, "justifications" are important. In this study, conflict exchanges that included a "justification" as an initiation move were shorter. However, this finding was marginally nonsignificant. Garton and Renshaw (1988) stated that "hesitation enables formulation of a reasoned argument and is a marker of social monitoring. The child is telling the partner that mutual agreement is required" (p. 282). Hence, "delay/distraction" is a salient skill for the resolution of verbal conflicts. The ability to frame challenges indirectly is also an advanced skill (Hewitt et al., 1993). Therefore, the "question/challenge" conflict initiation move is potentially a marker of superior conflict resolution abilities. The results of this study indicated that when all of the verbal dissension episodes were considered, the normal-progress students used "justifications", "delay/distractions", and "question/challenges" at a higher rate than did the intellectually disabled students. The rates for the normal-progress students were particularly greater for the "question/challenge" move, a move believed to "soften" disagreements. This was a significant finding. The present study thereby confirmed that the mildly intellectually disabled students used these "higher level" conflict initiating moves at a lower rate than their normal-progress peers. Both males and females

demonstrated this trend. This means that when intellectually disabled students launch an opposition, they do not use higher level strategies at a rate comparable to their normal-progress peers.

The "alternative" conflict initiating move also may be a higher level strategy for conflict initiation. The intellectually disabled female students used the "alternative" conflict initiation strategy at a higher rate than their normal-progress peers. Proposing an "alternative" may be a higher level conflict initiation move that is readily used by the mildly intellectually disabled students. Sherman et al. (1992); and D. W. Johnson and R. T. Johnson (1995) suggested that proposing a "compromise" solution may be an important verbal skill for conflict resolution. The "alternative" category captures these compromise solutions as well as other alternative solutions. That is, the "alternative" category encompasses not only "alternative" solutions which are compromises, but also alternatives that simply offer a solution other than either of the solutions initially proposed by each dyad member (not a compromise). Perhaps in future investigations "alternatives" which are compromises should be distinguished from ones which are not.

Eisenberg (1992) noted that "indirect no", "delay/distraction" and "question/challenge" conflict initiation moves were infrequent in conflicts between mothers and their preschool children. This was not the case in the present study, an observation which may be related to the developmental phase of the participants, or simply due to variability in conflict behavior across situations, settings, and time.

Negative Affect

When displayed, negative affect consisted of increased vocal intensity and prosodic features typically judged by native English speakers as "negative". There were no instances of screaming or crying as expressions of negative affect, however. The intellectually disabled students and the normal-progress students alike maintained positive affect throughout most of the verbal disagreements that arose during the learning task. The intellectually disabled students were no more likely than their normal-progress peers to express negative affect in conflict, therefore intellectually disabled students are doing well here. That is, on this dimension, the intellectually disabled and their normal-progress peers behaved quite similarly.

Also, negative affect was more prevalent in "mutual" conflicts than in "compliance exchanges". Therefore, the participants tended to display negative affect in longer conflicts. Hypothesis testing confirmed that when negative affect was demonstrated by one learning partner in the disagreement, it also was reciprocated by the other.

While negative affect may be a form of paralinguistic communication that signals certain dissatisfaction to one's partner, its potential to precipitate further negative responses such as screaming or aggression cannot be ignored. Indeed, the present study confirmed that negative affect was displayed more frequently in "mutual" conflicts than in "compliance exchanges". Students may benefit from conflict resolution programming that promotes strategies that lead to peaceful outcomes. Sherman et al. (1992) suggested that maintaining a normal positive and nonaccusing voice tone is an important conflict resolution skill. Therefore, being taught to maintain positive affect may be one such

strategy. Intellectually disabled and normal-progress students alike may benefit from instruction regarding the importance of maintaining positive affect.

Justifications within Disagreements

The ability to provide a reason or justification may be an important skill for avoiding unnecessary conflicts and for resolving differences (D. W. Johnson & R. T. Johnson, 1995). Eisenberg and Garvey (1981) reported that conflict exchanges that offer a reason are generally shorter than ones in which an explanation is not offered. This was marginally reconfirmed in the present investigation. The use of justifications may be an important verbal skill for averting conflicts that degenerate into aggressive or violent acts (D. W. Johnson & F. P. Johnson, 1997). This may have implications for conflict resolution and social skills training programs for students with intellectual disabilities. The empirical literature indicates that intellectually disabled individuals frequently display aggression or behavior disorders (Fuchs & B.A. Benson, 1995; Hile & Desrochers, 1993; Leffert & Siperstein, 1996).

Compliance Exchanges versus Mutual Conflict

In the learning task used for this investigation, simple disagreements ("compliance exchanges") prevailed. Piaget (1932) distinguished between "primitive" and "genuine" arguments. "Primitive" ones are simply statements of conflicting views whereas "genuine" disagreements include justifications for their respective positions (Lindow et al., 1985). Hence, although "genuine" disagreements were present when the intellectually disabled students and the normal-progress students interacted, there was a preponderance of

"primitive" arguments as well. In fact, a majority of conflicts that these intellectually disabled students participated in were "primitive" rather than "genuine". That is, a majority of conflicts were aborted in the sense that they did not progress beyond the initial disagreement. Similarly, as suggested by the rate of single turn "compliance exchanges", the normal-progress students were also participating in more "primitive" than "genuine" conflicts during the learning task. One could argue that the normal-progress and the intellectually disabled students are equally at risk because they both participated in "primitive" conflicts. However, the fact that the normal-progress students initiated almost twice as many conflicts as did the intellectually disabled students is a concern, because this means that the intellectually disabled students practice aborting conflicts twice as often as do normal-progress students. Over time, this practice effect may strengthen compliance behavior by the intellectually disabled students. Hence, in future research, it may be important to examine why both intellectually disabled and normal-progress students engage in "primitive" conflicts. Explanations for these "primitive" conflicts may be relevant, for example, to any interventions aimed at promoting more frequent use of "genuine" conflicts during learning engagements.

It is possible that the intellectually disabled and normal-progress students engage in "primitive" conflicts for different reasons. Perhaps intellectually disabled students abort conflicts because of a "failure-accepting" (Covington, 1993) approach to academic activities. Alternatively, perhaps the intellectually disabled students exhibit difficulties with conversational repair. Difficulties repairing conversations may shorten disagreements because the intellectually disabled student may lack the skills necessary for continuing to

engage in the conflict episode. Renshaw and Asher (1982, cited in Dodge & Feldman, 1990) found that during the resolution of a conflict, children with low sociometric status were more likely to select "avoidant" goals. The nature of the learning task used in the present study also may account for the preponderance of "primitive" conflicts by the intellectually disabled and normal-progress learners. Nijhof and Kommers (1985) reported on a pilot study in which they used a simulation game as a problem-solving task to examine verbal interaction patterns in group discussions. The simulation exercise described by Nijhof and Kommers was similar in some respects to the simulation used in the present investigation. For example, in the Nijhof and Kommers study, participants were required to rank the importance of 15 objects necessary to survive in the desert after a plane crash. In the present study, student dyads considered a list of supplies important for survival on the prairies, and jointly chose ten items from the list. The students also considered other lists of strategies important for survival. Nijhof and Kommers commented on the simulation procedure employed in their pilot study, stating:

> We came to the conclusion that the closed problem-solving task had provoked a rather rigid means of argumentation, presumably based on a significant lack of adequate prior knowledge and a low degree of participation in the group communication process (Kommers, 1981, p.133).

In conclusion, whatever the cause of these aborted attempts at participation in conflicts, this issue requires further investigative work.

Conflict Topic

The normal-progress students debated "lesson content" relatively more often than do the intellectually disabled students. The intellectually disabled students debated "lesson

process" and "assistance" more often than do the normal-progress students. This suggested that issues arising within educational activities may be different for the intellectually disabled students.

Since the vast majority of conflicts pertained to "lesson content", this underscores the relevance of content to students' growth and development in various areas. For example, if one of the goal's of education is to promote students' development of moral reasoning, then one could speculate that for disagreements to arise in the classroom related to moral issues, then the content of lessons should encompass moral dilemmas.

For this study, the activity chosen for the educational task in general involved "declarative" knowledge rather than "procedural" knowledge (Gagne, 1985). Perhaps classroom lessons that deal with procedures would shift the balance of conflict topics such that more disagreements regarding "lesson process" and "assistance" would arise. A comparison could be made in future investigations.

Last Turn

The normal-progress student did take the last turn more often than did the intellectually disabled student. Hypothesis testing, however, revealed a marginally nonsignificant result. Exploratory analysis of the data revealed that the student who initiated the verbal dissension episode also seemed to be the student taking the last turn. There may be some value in further examination of this finding in future studies.

Conflict Outcomes

The hypothesis that the mildly intellectually disabled student would submit more often than the normal-progress peer was marginally nonsignificant. "Intellectually disabled submits" was the most prevalent outcome (41.71%). "Standoff" and "compromise" were relatively infrequent conflict outcomes. In this study, "compromise" seldom occurred. The "standoff" finding for the present study differs from that found by other researchers. Eisenberg (1992) noted that 64.0% of verbal conflicts between mothers and their young children ended in a "standoff". Vuchinich (1987) found that 61.0% of family dinnertime disputes with older children ended in "standoff". In the present investigation, the "standoff" outcome occurred only 20.9% of the time. Perhaps in peer disputes there is a lower rate of "standoff" outcome than in authority relationships. Alternatively, the computer activity may have biased the outcome of conflict in favor of submissions. Although the use of an educational computer software activity assured a common focus for the dyadic interactions of the student pairs, the need to select a single answer from an array of possible responses may have reduced the likelihood that the conflict exchanges would result in "compromise" or "standoff" conflict outcomes. While the educational software required decisions to be made and therefore elicited the behavior chosen for study (that is, controversy and conflict exchanges), it may have imposed restrictions on the conflict outcomes available to the participants engaged in a disagreement.

Conclusion

The purpose of this study was twofold: (a) to advance our understanding of the pragmatic language skills and general language skills of mildly intellectually disabled adolescents; and (b) to investigate how mildly intellectually disabled learners negotiate verbal disagreements with their normal-progress peers. This led to some findings which may be of value in assisting the social integration of intellectually disabled children.

Mildly intellectually disabled adolescents are learners who on formal assessment demonstrate language skills that fall well behind those of their normal-progress peers. The extant empirical literature points to suspected pragmatic language deficits and general language impairments among adolescents with mild intellectual disabilities. The current investigation provides comprehensive evidence confirming the existence of their pragmatic and linguistic deficits. Therefore, mildly intellectually disabled adolescents bring to the task of conflict negotiation a repertoire of language behaviors that, relative to their normal-progress peers, are limited in scope and in quality. It is apparent that mildly intellectually disabled adolescents when functioning in cooperative learning groups will be at a serious disadvantage compared to their peers when conflicts occur or when explanations, reports, or presentations are required.

In their verbal conflict engagements with normal-progress peers, mildly intellectually disabled adolescents assume a respondent role. Their normal-progress peers dominate during verbal disputes, initiating conflicts at almost twice the rate of adolescents with mild intellectual disabilities. Like their normal-progress peers, these learners are

sensitive to "requests for action". About 70% of the conflicts that the mildly intellectually disabled learner initiates are in response to their partner's "request for action" (or behavioral request). Adolescents with mild intellectual disabilities fail to use "higher level" conflict initiating moves at the rate used by their normal-progress peers. Their less frequent use of higher level conflict initiating moves (such as justifications, delay/distraction, and question/challenge) may be indicative of poorer social monitoring, impaired language facility, or both. Throughout the entire length of verbal conflicts, they employ justifications noticeably less often than their normal-progress peers. Their conflicts with peers are brief ("primitive" rather than "genuine" conflicts), averaging about two conversational turns. In fact, close to half of their conflicts with normal-progress peers are single turn compliance exchanges. When intellectually disabled students initiate conflicts, their conflicts are less likely to develop into "mutual" disagreements ("genuine" conflicts) than when conflicts are initiated by their normal-progress peers. During learning engagements, students with mild intellectual disabilities typically debate "lesson content" but also may dispute "lesson process" or unwanted "assistance" from their learning partner. In most conflicts, negative affect is absent but when negative affect is displayed in their conflicts with peers, typically it is reciprocated. Male and female adolescents with mild intellectual disabilities may have different styles of conflict negotiation. This could not be confirmed, however, as the intellectually disabled female participants in this study demonstrated poorer general language performance on formal language tests.

In the current study, the performance of mildly intellectually disabled learners during conflict dialogues suggested that these students may be marginalized in a number of

areas. Since conflict is believed to be a powerful impetus for moral (Kohlberg, 1981), social (Selman, 1980), and cognitive (Piaget, 1932) development, the deficits and differences displayed by mildly intellectually disabled adolescents cannot be ignored. Steps need to be taken to promote those verbal conflict behaviors believed to be adaptive for learning and development. In the present study, there was evidence of deficits and differences in the conflict behavior of mildly intellectually disabled students at the junior high level. Therefore, it is imperative that these weaknesses be addressed by interventionists and educational practitioners, before these students transition to the work force. It is also imperative that future research efforts be conducted to illuminate further the nature of mildly intellectually disabled students' strengths and limitations in this area. These findings are important if we are to design better learning environments and interventions to address their deficits. Future investigations may inform the structure, process, and content of social skills training programs and conflict resolution training programs for mildly intellectually disabled individuals. This may facilitate their social integration and promote full inclusion.

Implications of the Study

Adolescents with mild intellectual disabilities demonstrate significant pragmatic and general language impairments which may impede or limit their ability to function in cooperative learning engagements. The existence of these deficits does not necessarily mean that they cannot function in cooperative learning arrangements. However, teachers need to be sensitive and aware of these students' language competence when evaluating students' performance and when designing instructional activities. Language deficits exist

and compensations have to be made for these deficits, to enhance these students' inclusion. When organizing cooperative learning groups, teachers need to be aware of these language difficulties and structure the activities in ways that do not disadvantage the mildly intellectually disabled students.

The listening mode was an area of comparative strength for these learners. Therefore, test adaptations in which "questions" are presented auditorily to the student may be helpful. Furthermore, "listening" as an avenue for initial acquisition of new material may be optimal. This means that instruction should be designed in such a way that opportunities to "hear" relevant information are available to the intellectually disabled learner. Presentation of material in ways that either limit or bypass the auditory channel may reduce intellectually disabled students' ability to benefit from, or participate in, the instructional activity. The availability of auditory input to supplement other instructional efforts, may enhance these learners' involvement. Passive academic involvement is one of the difficulties evidenced by students with mild intellectual disabilities (Maheady, Sacca, & Harper, 1988).

There are a number of ways to accomplish this. For example, in group contexts, the student who assumes the role of group leader could ensure that all students know what the assigned task (or proposed solution) is. Taking the time to read aloud the instructions (or the proposed answer) may enhance these students' inclusion.

Cooperative learning groups could be structured to compensate for the deficits that these students demonstrated during the negotiation of verbal disagreements. For example, since mildly intellectually disabled learners initiated conflicts only about half as

often as normal-progress learners, one member of the group could be a group "monitor" who ensures that all members of the group have ample opportunity to hold the floor and initiate discussions. In cooperative learning engagements, the teacher may structure "positive reward interdependence" by making rewards contingent upon equal participation in discussions by all group members. Structuring positive reward interdependence to foster increased participation by mildly intellectually disabled students should be considered (Pressley & McCormick, 1995).

This could work as follows. A cooperative group's score for participation could be linked to the number of times each group member held a turn during the discussion. Groups in which there is equal participation by each member would receive a greater reward. Lower group scores would be awarded to those teams where there are large differences between the group members for the turns at talk. This type of group reward structure may foster increased participation by students with intellectual disabilities.

"Justifications" were employed less frequently by the intellectually disabled learners. Therefore, in cooperative learning groups, students could be encouraged to monitor the use of "justifications" during group discussions. (The reader may refer to Appendix E and to Eisenberg [1992] for examples of verbal disagreements in which "justifications" are used). Take, for example, the situation where a disagreement is stated, but a "justification" has not been given. The group leader could assume responsibility for encouraging group members to supply "justifications". In cooperative learning engagements, the group leader could point out to the group members that a disagreement has been voiced. The leader then could encourage the group members to offer a

justification(s) to support that position. The group leader may require training to do this in a non-threatening manner. The group leader may, for example, prompt a particular student to offer a justification. If the student cannot or does not respond when s/he is asked to justify a solution, the group leader then could propose to the other group members that they collectively identify possible reasons why the student proposed the given solution. The strategy just described may be a simple, straightforward way to promote the use of "justifications" during group discussions. This may enhance students' awareness of "justifications". Once again, the teacher could structure group rewards so that students' awareness of these "justifications" is enhanced.

Similarly, since "question/challenges" were employed less frequently by intellectually disabled learners, cooperative learning groups participants could monitor the use of "questions" by the group members. (See Appendix E for examples of this conflict initiating move). The teacher may structure "positive reward interdependence" by ensuring that rewards are contingent upon well-distributed use of "questions" by all participants within the group. This may facilitate the use of this conversational device by all students.

Some scholars have recommended using literature to promote students' awareness of strategies for conflict resolution (J. O. Cooper, 1994; Hall, 1994; Hinitz, 1994; Luke & Myers, 1995; Shatles, 1992). Reading and writing activities could be used to help students notice various features of verbal conflicts. Students may have difficulty identifying and exploring the features of verbal disagreements in ongoing conversation, due to the transitory nature of the speech signal. Using the printed word,

justifications/explanations, questions/challenges and other aspects of conflicts could be pointed out to students. The permanence of texts may be very important for promoting students' awareness not only of the structure of verbal conflicts, but also of strategies for negotiating disagreements effectively.

The creative educational practitioner will structure learning activities in these and other ways, to promote fuller inclusion of mildly intellectually disabled learners. Further research may illuminate strategies which will enhance the participation of these learners in cooperative learning engagements.

Future Directions

1. The present research did not examine any associations between performance on the language measures and behavioral differences between males and females during conflict. The results of this study seemed to suggest that female dyads engaged in conflict less often because of their general language skills. Statistical analyses to explore these relationships could be conducted as a follow-up to this study. For example, correlational analyses could address questions such as: Is there a relationship between the language scores and the frequency of male/female conflict initiation? Regardless of gender differences, is there a relationship between performance on the language measures and the use of more advanced conflict initiation moves (for example, justification, delay/distraction, question/challenge)?

2. Eisenberg (1992) stated that the rules for regulating social conflicts depend on the context in which the dispute occurs. This study offers insight into the conflicts that arise between intellectually disabled and normal-progress adolescents engaged in a single learning context. It would be important to examine this phenomenon in other learning contexts and social contexts (that is, within different situations, settings, and developmental phases). It also would be interesting to examine the conflict negotiation of students who fall outside the age range, grade level, and ability level chosen for the present study. Furthermore, there is a need to investigate more fully the conflicts arising between intellectually disabled adolescents and authority figures (parents, teachers, employers).

3. The distinction between "serious" and "nonserious" conflict was advanced by Garvey and C. U. Shantz (1992) who indicated there is evidence that serious disagreements can differ from playful ones. It therefore may be instructive to distinguish between these two types of conflicts in any future examination of the disputes of mildly intellectually-disabled adolescents. Further study to explore the nature of enactive disagreements and to compare and contrast disagreements that arise from verbal stimuli versus those arising from nonverbal behaviors is warranted.

4. Research into the "agreements" evidenced in learning tasks may illuminate the nature of intellectually disabled students' learning. P. E. Bryant (1982, cited in

Garton, 1992) proposed that "children learn when strategies (producing a solution to a problem) agree rather than when they conflict" (p. 69). P. E. Bryant's (1982) evidence is limited to a small number of six year old children performing a measuring task. However, he found that agreement between strategies improved measuring whereas conflict did not. P. E. Bryant's (1982) argument was that "conflict tells the child that something is wrong but not what it is, and certainly not what is the right strategy" (p. 243). His evidence suggests that perhaps agreements as well as disagreements could be explored in future studies. Hartup (1992) also stated that two kinds of social events (agreements and disagreements) supply most of the information that people need about social exchange outcomes. Piaget's (1959) model of the development of peer conversations during childhood may inform future research in this area. Bennett and Dunne (1991) stated "the categories comprising the model allow both an analysis of the demand for talk...and of ways in which talk is managed, on an agreement - disagreement dimension" (p. 108). Therefore, it may be important to examine agreements as well as disagreements in future studies.

5. This study did not examine achievement on the learning task. It would be interesting to determine whether dyads with a higher frequency of conflict or with a higher proportion of "genuine" versus "primitive" conflicts demonstrate higher achievement on a post test. Do students who have conflicts which use more advanced or "higher level" initial oppositional moves exhibit superior performance

on a achievement measure than those who do not employ the higher level strategies? These considerations need to be addressed.

6. Do students perform differently when working in dyads or in triadic/multi-party contexts, when it comes to the area of verbal disagreements? Can children who observe or overhear disagreements benefit from hearing the interactions/disagreements that arise between other partners of the group (Brainerd, 1978; Forrester, 1992). In multi-party disagreements, are there differences between female, male, and mixed ability groupings, in the area of verbal disagreements? These questions need to be addressed.

7. Whether or not more advanced conflict resolution strategies can be made explicit and taught to the intellectually disabled students needs consideration. Can a prompting strategy help these students to explore and use higher level conflict resolution strategies or an increased variety of strategies? Student partners in this study initiated, maintained, and resolved disagreements when they spontaneously occurred. They did so without having received explicit instructions about how to resolve disagreements. Should teachers, for example, encourage the occurrence of verbal disagreements, by having students check their answers regularly, as Lindow et al. (1985) suggested? These questions need to be explored. Answers to these and to related questions could result in remediation programs and social skills training efforts directed more specifically to these students. Research to discover

ways to augment the mildly intellectually disabled students' existing skills needs to be conducted. Determining which social skills training efforts are most successful and expedient in promoting intellectually disabled students' development will be important.

The topics for future research suggested here are wide ranging and would be interesting to pursue. The goal of educational programming is to generate desirable educational outcomes. This is best accomplished if research efforts that identify the optimal type of programming for these students are accomplished. Appolloni and Cook (1978) recommended that "researchers should begin to determine what constitutes the optimal developmental skill blend for integrated intervention programs" (p. 157). How to structure events in classrooms in order to integrate mildly intellectually disabled adolescents most effectively and to promote positive social interactions and educational opportunities is desirable and important. This knowledge only can be gained through progressive research efforts. Understanding the aforementioned questions may facilitate the social integration of mildly intellectually disabled students.

Peer conflict remains an important phenomenon to examine. The research literature suggests that there are developmental changes in children's physically aggressive behavior with age. Children report strategies for handling peer conflict which include a trend away from physical aggression in older children. Fewer aggressive tactics are employed and more assertive and verbal strategies are pursued (Wiley, 1983; Hartup, 1983). Therefore,

understanding the nature of adolescents' verbal disagreements remains a fertile area for future research. Furthermore, since aggressive behaviors are believed to play a causative role in children's rejected peer status (Coie & Kupersmidt, 1983; Dodge, 1983; Dodge, Schlundt, Schocken, & Delugach 1983), it is important that students or adolescents have a verbal means to resolve disagreements successfully.

Follow-up

A summary of the findings will be available to all stakeholders in the research.

1. A formal, detailed written summary containing aggregate data only will be made available to the administration of participating school divisions. The identity of individual participants will be protected in this final summary of the research.

2. A similar report of the outcome of the research also will be available to schools that participated. This information can be summarized in writing, especially noting the educational implications of the research for practitioners.

3. Parents/guardians will be sent a letter describing the outcome of the study. This letter will be scrutinized by representatives of the administration of participating school divisions before it is disseminated to parents.

REFERENCES

Abbeduto, L. (1991). Development of verbal communication in persons with moderate to mild intellectual disabilities. International Review of Research in Mental Retardation, 17, 91-115.

Abbeduto, L., Davies, B., Solesby, S., & Furman, L. (1991). Identifying the referents of spoken messages: The use of context and clarification requests by children with intellectual disabilities and by nonretarded children. American Journal on Mental Retardation, 95(5), 551-562.

Abbeduto, L., Furman, L., & Davies, B. (1989). Relation between the receptive language and mental age of persons with intellectual disabilities. American Journal on Mental Retardation, 93(5), 535-543.

Abbeduto, L., & Nuccio, J. B. (1991). Relation between receptive language and cognitive maturity in persons with intellectual disabilities. American Journal on Mental Retardation, 96(2), 143-149.

Abbeduto, L., & Rosenberg, S. (1980). The communicative competence of mildly retarded adults. Applied Psycholinguistics, 1, 405-426.

Aboud, F. E. (1981). Egocentrism, conformity, and agreeing to disagree. Developmental psychology, 17, 791-799.

Aboud, F. E. (1992). Conflict and group relations. In C. U. Shantz & W. W. Hartup (Eds.), Conflict in child and adolescent development (pp. 356-379). New York: Cambridge University Press.

Affleck, G. G. (1975a). Role-taking ability and interpersonal conflict resolution among retarded young adults. American Journal of Mental Deficiency, 80(2), 233-236.

American Association on Mental Retardation (AAMR). (1992). Mental retardation: Definition, classification, and systems of supports (9th ed.). Washington, DC: Author.

American Psychiatric Association (APA). (1994). Diagnostic and statistical manual of mental disorders (4th ed.). Washington, DC: Author.

Anderson-Levitt, K. M. (1985). Taking sides: Resolution of a peer conflict in a workshop for retarded adults. In S. Sabsay & M. Platt (Eds.), Social setting, stigma, and communicative competence: Exploration of the conversational interactions of retarded adults (pp. 41-74). Philadelphia: John Benjamins Publishing Company.

Appolloni, T., & Cooke, T. P. (1978). Integrated programming at the infant, toddler, and preschool levels. In M. J. Guralnick (Ed.), Early intervention and the integration of handicapped and nonhandicapped children (pp. 147-166). Baltimore: University Park Press.

Bakeman, R., & Gottman, J. M. (1986). Observing interaction: An introduction to sequential analysis. Cambridge: Cambridge University Press.

Barrett, M. D., & Diniz, F. A. (1989). Lexical development in mentally handicapped children. In M. Beveridge, G. Conti-Ramsden, & I. Leudar (Eds.), Language and communication in mentally handicapped people. New York: Chapman and Hall.

Bearison, D. J. (1982). New directions in studies of social interaction and cognitive growth. In F. Serafica (Ed.), Social-cognitive development in context (pp. 199-221). New York: Guilford Press.

Bearison, D. J., Magzamen, S., & Filardo, E. K. (1986). Socio-cognitive conflict and cognitive growth in young children. Merrill-Palmer Quarterly, 32(1), 51-72.

Bedrosian, J. L. (1993). Making minds meet: Assessment of conversational topic in adults with mild to moderate intellectual disabilities. Topics in Language Disorders, 13(3), 36-46.

Bennett, N., & Dunne, E. (1991). The nature and quality of talk in co-operative classroom groups. Learning and Instruction, 1, 103-118.

Benson, M. (1996). Structure, conflict, and psychological causation in the fictional narratives of 4- and 5-year olds. Merrill-Palmer-Quarterly, 42(2), 228-247.

Berkowitz, M. W., & Gibbs, J. C. (1985). The process of moral conflict resolution and moral development. In M. W. Berkowitz (Ed.), Peer conflict in psychological growth: New directions for child development (pp. 71-84). San Francisco: Jossey-Bass.

Boggs, S. T. (1978). The development of verbal disputing in part-Hawaiian children. Language in Society, 7, 325-344.

Bradley, L. J., & Meredith, R. C. (1991). Interpersonal development: A study with children classified as educable mentally retarded. Education and Training in Mental Retardation, 26(2), 130-141.

Brainerd, C. J. (1978). Piaget's theory of intelligence. Englewood Cliffs, NJ: Prentice-Hall.

Bretherton, D., Allard, A., & Collins, L. (1994). Engendering friendship: Gender and conflict in after school care. In K. Oxenberry, K. Rigby, & P. Slee (Eds.), Children's peer relations: Cooperation and conflict - Conference proceedings (pp. 57-65). Adelaide, South Australia: University of South Australia.

Brenneis, D., & Lein, L. (1977). "You fruithead" A sociolinguistic approach to children's dispute settlement. In S. Ervin-Tripp & C. Mitchell-Kernan (Eds.), Child Discourse (pp. 49-65). New York: Academic Press.

Brown, R. (1973). A first language: The early stages. Cambridge: Harvard University Press.

Bruner, J. (1986). Play, thought, and language. Prospects: Quarterly Review of Education, 16(l), 77-83.

Bryant, B. K. (1992). Conflict resolution strategies in relation to children's peer relations. Journal of Applied Developmental Psychology, 13, 35-50.

Bryant, P.E. (1982). The role of conflict and agreement between intellectual strategies in children's ideas about measurement. British Journal of Psychology, 73, 243-251.

Canadian Education Index (1976 - Dec. 1995) [CD-ROM]. (1995) [S.L.]: Knight-Ridder Information [Producer].

Chapman, R. S., & Nation, J. E. (1981). Patterns of language performance in educable mentally retarded children. Journal of Communication Disorders, 55, 761-770.

CLASS Software (1987). Fort Walsh [Computer program]. Winnipeg, Man.: University of Manitoba, Manitoba Computer Assisted Learning Consortium MCALC

Coie, J. D., & Kupersmidt, J. B. (1983). A behavioral analysis of emerging social status in boys' groups. Child Development, 54, 1400-1416.

Conover, W. J. (1980). Practical nonparametric statistics (2nd ed.). New York: Wiley.

Cooper, C. R., Ayers-Lopez, S., & Marquis, A. (1982). Children's discourse during peer learning in experimental and naturalistic situations. Discourse Processes, 5, 177-191.

Cooper, C. S. (1986). A study of pragmatic skill development in two groups of young children: Mildly retarded and non-handicapped. Lawrence, Kansas: Kansas University, School of Education. (ERIC Document Reproduction Service No. ED 296 564)

Cooper, J. O. (1987). Planning and directing observational procedures. In J. O. Cooper, T. E. Heron, & W. L. Heward (Eds.), Applied behavior analysis (pp. 81-103). Toronto: Merrill.

Cooper, S. A. (1994). Is children's literature a feasible medium for forging ploughshares from swords. Journal of Youth Services in Libraries, 8, 19-25.

Covington, M. V. (1993). A motivational analysis of academic life in college. In J. Smart (Ed.), Higher education: Handbook of Theory and research, (Vol. IX, pp. 50-93). New York: Agathon.

Daniel, W. W. (1990). Applied nonparametric statistics (2nd ed.). Boston: PWS-Kent.

Davis, H., & Oliver, B. (1980). A comparison of aspects of the maternal speech environment of retarded and nonretarded children. Child: Care, Health, and Development, 6, 135-145.

Davis, H., Stroud, A., & Green, L. (1988). Maternal language environment of children with intellectual disabilities. American Journal on Mental Retardation, 93, 144-153.

Dodge, K. A. (1983). Behavioral antecedents of peer social status. Child Development, 54, 1386-1399.

Dodge, K. A., & Feldman, E. (1990). Issues in social cognition and sociometric status. In S. R. Asher & J. D. Coie (Eds.), Peer rejection in childhood (pp. 119-155). Cambridge: Cambridge University Press.

Dodge, K. A., Schlundt, P. G., Schocken, I., & Delugach, J. D. (1983). Social competence and children's social status: The role of peer group entry strategies. Merrill-Palmer Quarterly, 29, 309-336.

Doise, W., & Mackie, D. (1981). On the social nature of cognition. In J. P. Forgas (Ed.), Social cognition: Perspectives on everyday understanding (pp. 53-83). London: Academic Press.

Drew, C. J., Hardman, M. K., & Logan, D. R. (1996). Concepts, definitions, and classifications. In C. J. Drew, M. L. Hardman, & D. R. Logan (Eds.), Mental retardation: A life cycle approach (6th ed., pp. 2-30). Englewood Cliffs, NJ: Merrill.

Dunn, J., Brown, J., Slomkowski, C., Tesla, C., & Youngblade, L. (1991). Young children's understanding of other people's feelings and beliefs: Individual differences and their antecedents. Child Development, 62, 1352-1366.

Eder, D. (1990). Serious and playful disputes: Variations in conflict talk among female adolescents. In A. D. Grimshaw (Ed.), Conflict talk (pp. 67-84). Cambridge: Cambridge University Press.

Education of the Handicapped Act Amendments of 1990 (PL 101-476) (1990).

Edwards, A. J. (1989). Review of the Test of Adolescent Language. In J. C. Conoley & J. J. Kramer (Eds.). The tenth mental measurements yearbook (pp. 828-830). Lincoln Nebraska: The University of Nebraska Press.

Eisenberg, A. R. (1987). Learning to argue with parents and peers. Argumentation, 1, 113-125.

Eisenberg, A. R. (1992). Conflicts between mothers and their young children. Merrill-Palmer Quarterly, 38(1), 21-43.

Eisenberg, A. R., & Garvey, C. (1981). Children's use of verbal strategies in resolving conflicts. Discourse Processes, 4, 149-170.

ERIC database (SilverPlatter 3.11) [CD-ROM]. (1995). Norwood, MA: SilverPlatter Information [Producer and Distributor].

Erikson, E. H. (1963). Childhood and society (2nd ed.). New York: Norton.

Fahs, M. L. (1981). The effects of self-disclosing communication and attitude similarity on the reduction of interpersonal conflict. The Western Journal of Speech Communication, 45, 38-50.

Forman, E. A., & Kraker, M. J. (1985). The social origins of logic: The contributions of Piaget and Vygotsky. In M. V. Berkowitz (Ed.), Peer conflict and psychological growth: New directions for child development (pp. 23-39). San Francisco: Jossey-Bass.

Forrester, M. A. (1992). Illustrating the framework: Overhearing and the development of social-cognitive skills. In M. A. Forrester, The development of young children's social-cognitive skills (pp. 91-110). Hillsdale: Lawrence Erlbaum.

Friedman, M. (1937). The use of ranks to avoid the assumption of normality implicit in the analysis of variance. Journal of the American Statistical Association, 32, 675-701.

Freidman, M. (1940). A comparison of alternative tests of significance for the problem of *m* rankings. Ann. Math. Statist., 11, 86-92.

Fuchs, C., & Benson, B. A. (1995). Social information processing by aggressive and nonaggressive men with mental retardation. American Journal on Mental Retardation, 100(3), 244-252.

Gagne, E. D. (1985). Representation of knowledge. In E. D. Gagne, The cognitive psychology of school learning (pp. 35-67). Toronto: Little Brown.

Garton, A. (1992). Social explanations of cognitive development. In A. Garton (1992), Social interaction and the development of language and cognition (pp. 65-97). Hillsdale: Lawrence Erlbaum.

Garton, A. F. (1983). Children's language use in collaborative and conflict patterns of interaction. Paper presented at the Second International Conference on Social Psychology and Language, Bristol.

Garton, A. F. (1984). Social interaction and cognitive growth: Possible causal mechanisms. British Journal of Developmental Psychology, 2, 269-274.

Garton, A. F., & Renshaw, P. D. (1988). Linguistic processes in disagreements occurring in young children's dyadic problem solving. British Journal of Developmental Psychology, 6, 275-284.

Garvey, C. (1984). Children's talk. Cambridge, MA: Harvard University Press.

Garvey, C., & Shantz, C. U. (1992). Conflict talk: Approaches to adversative discourse. In C. U. Shantz & W. W. Hartup (Eds.), Conflict in child and adolescent development (pp. 93-121). Cambridge: Cambridge University Press.

Genishi, C., & DiPaolo, M. (1982). Learning through argument in a preschool. In L. C. Wilkenson (Ed.), Communicating in the classroom. New York: Academic Press.

Goodman, L. V. 1976 (July). A bill of rights for the handicapped. In: American Education. Washington, DC.: U.S. Department of Health, Education, and Welfare, U.S. Government Printing Office.

Goodwin, M. H., & Goodwin, C. (1987). Children's arguing. In S. U. Philips, S. Steele, & C. Tanz (Eds.), Language, gender, & sex in comparative perspective (pp. 200-322). New York: Cambridge University Press.

Gottman, J. M. (1979). Marital interaction: Experimental investigations. New York: Academic Press.

Graziano, A., & Bercow, J. E. (1985). [Problems cited by staff in group homes for the mentally retarded]. Unpublished raw data, State University of New York at Buffalo.

Greenspan, S. (1979). Social intelligence in the retarded. In N. R. Ellis (Ed.), Handbook of mental deficiency: Psychological theory and research (2nd ed., pp. 1-89). Hillsdale, NJ: Erlbaum.

Greenspan, S. (1981). Defining childhood social competence: A proposed working model. In B. K. Keogh (Ed.), Advances in special education (Vol. 3, pp. 1-39). Greenwich, CT: JAI Press.

Greenspan, S. (1994). Review of Mental retardation: Definition, classification, and systems of support. American Journal on Mental Retardation, 98, 544-548.

Grossman, H. J. (Ed.), (1983). Classification in intellectual disabilities. Washington, DC. American Association on Mental Deficiency.

Guralnick, M. J. (1986). The peer relations of young handicapped and nonhandicapped children. In P. S. Strain, M. J. Guralnick, & H. M. Walker (Eds.), Children's social behavior: Development, assessment, and modification (pp. 93-140). Toronto: Academic Press.

Guralnick, M. J., & Paul-Brown, D. (1984). Communicative adjustments during behavior request episodes among children at different developmental levels. Child Development, 55, 911-919.

Hall, O. L. (1994). Enhancing conflict resolution strategies with prekindergarten students through children's literature and a citizenship program. Unpublished doctoral

dissertation, Nova. Southeastern University, Florida. (From ERIC Abstracts, 1994, ERIC Document Reproduction Service No. ED 370 150).

Hammill, D. D., Brown, V. L., Larsen, S. C., & Wiederholt, J. L. (1994). Test of Adolescent and Adult Language - Third Edition. Austin, TX: PRO-ED.

Hartup, W. W. (1978). Peer interaction and the processes of socialization. In M. J. Guralnick (Ed.), Early intervention and the integration of handicapped and nonhandicapped children (pp. 27-51). Baltimore, MD: University Park Press.

Hartup, W. W. (1992). Conflict and friendship relations. In C. U. Shantz & W. W. Hartup (Eds.), Conflict in child and adolescent development (pp. 186-215). Cambridge: Cambridge University Press.

Hay, D. F. (1984). Social conflict in early childhood. In G. Whitehurst (Ed.), Annals of child development (Vol. 1, pp. 1-44). Greenwich, CT: JAI.

Hay, D. F., & Ross, H. S. (1982). The social nature of early conflict. Child Development, 53, 105-113.

Hewitt, L. E., Duchan, J. F., & Segal, E. M. (1993). Structure and function of verbal conflicts among adults with mental retardation. Discourse Processes, 16(4), 525-543.

Hile, M. G., & Desrochers, M. N. (1993). The relationship between functional assessment and treatment selection for aggressive behaviors. Research in Developmental Disabilities, 14(4), 265-274.

Hinitz, B. (1994). Peace education for children: Research on resources. New Orleans, LA: American Education Research Association (ERIC Document Reproduction Service No. ED 375 973).

Hughes, M. J., & Lyles, S. K. (1994). The meaning of friendship: Expectations and understanding of friendship of mainstream intellectually challenged students. Exceptionality Education Canada, 4(1), 43-53.

Inder, P., & Todd, R. (1993). Conflict resolution during co-operative learning with computers. Set, 2(12), 1-6.

International Association for the Scientific Study on Intellectual Disabilities (1996). Program and abstracts: 10th world congress of IASSID. Helsinki, IASSID.

International ERIC (1976 - Dec. 1995) [CD-ROM]. (1995) [S.L.]: Knight-Ridder Information [Producer].

Johnson, D. W. (1981a). Student-student interaction: The neglected variable in education. Educational Researcher, January, 5-10.

Johnson, D. W. (1981b). Social psychology. In F. Farley & N. Gordon (Eds.), Psychology and education: The state of the union. Berkeley, CA: McCutchon.

Johnson, D. W., & Johnson, F. P. (1997). Conflict of interests. In D. W. Johnson & F. P. Johnson (Eds.), Joining together: Group theory and group skills (6th ed., pp. 333-399). Boston, MA: Allyn and Bacon.

Johnson, D. W., & Johnson, R. (1984). Classroom learning structure and attitudes toward handicapped students in mainstream settings: A theoretical model and research evidence. In R. Jones (Ed.), Special education in transition: Attitudes toward the

handicapped. Reston, VA: ERIC Clearinghouse on Handicapped and Gifted Children, The Council for Exceptional Children.

Johnson, D. W., & Johnson, R. T. (1979). Conflict in the classroom: Controversy and learning. Review of Educational Research, 49, 51-70.

Johnson, D. W., & Johnson, R. T. (1980). Integrating handicapped students into the mainstream. Exceptional Children, 47, 90-98.

Johnson, D. W., & Johnson, R. T. (1984). Building acceptance of differences between handicapped and nonhandicapped students: The effects of cooperative and individualistic instruction. Journal of Social Psychology, 122(2), 257-267.

Johnson, D. W., & Johnson, R. T. (1985). The internal dynamics of cooperative learning groups. In Slavin, R., Sharan, S., Kagan, J., Lazarowitz, R. H., Webb, C., & Schmuck, R. (Eds.), Learning to cooperate, cooperating to learn (pp. 103-124). New York: Plenum Press.

Johnson, D. W., & Johnson, R. T. (1986). Mainstreaming and cooperative learning strategies. Exceptional Children, 52(6), 553-561.

Johnson, D. W., & Johnson, R. T. (1991). Learning together and alone (2nd ed.). Englewood Cliffs: Prentice-Hall.

Johnson, D. W., & Johnson, R. T. (1995). Reducing school violence through conflict resolution. Alexandria, VA: Association for Supervision and Curriculum Development.

Johnson, D. W., Johnson, R. T., & Maruyama, G. (1983). Interdependence and interpersonal attraction among heterogeneous and homogeneous individuals: A

theoretical formulation and a meta-analysis of the research. Review of Educational Research, 53(1), 5-54.

Johnson, D. W., Johnson, R. T., Roy, P., & Zaidman, B. (1985). Oral interaction in cooperative learning groups: Speaking, listening, and the nature of statements made by high-, medium-, and low-achieving students. Journal of Psychology, 119(4), 303-321.

Johnson, D. W., Johnson, R. T., & Smith, K. A. (1995). Cooperative learning and individual student achievement in secondary schools. In J. E. Pederson & A. D. Digby (Eds.), Secondary schools and cooperative learning: Theories, models, and strategies (pp. 3-54). New York: Garland Publishing.

Johnson, D. W., Johnson, R. T., Warring, D., & Maruyama, G. (1986). Different cooperative learning procedures and cross-handicap relationships. Exceptional Children, 53(3), 247-252.

Johnson, R. T., & Johnson D. W. (1981). Building friendships between handicapped and nonhandicapped students: Effects of cooperative and individualistic instruction. American Educational Research Journal, 18(4), 415-423.

Johnson, R. T., & Johnson D. W. (1982). Effects of cooperative and competitive learning experiences on interpersonal attraction between handicapped and nonhandicapped students. Journal of Social Psychology, 116(2), 211-219.

Johnson, R. T., & Johnson D. W. (1983). Effects of cooperative, competitive, and individualistic learning experiences on social development. Exceptional Children, 49(4), 323-329.

Kohlberg, L. (1981). The philosophy of moral development. San Francisco: Harper and Row.

Kohlberg, L., Colby, A., Gibbs, J. Speicher-Dubin, B., & Power, C. (1978). Assessing moral stages: A manual. Cambridge, MA. Center for Moral Education, Harvard University Press.

Kohlberg, L., & Gilligan, C. (1972). The adolescent as a philosopher: The discovery of the self in a postconventional world. In J. Kayan & R. Coles (Eds.), Twelve to sixteen, early adolescence (pp. 144-179). New York: Norton.

Kommers, P. (1981). Communication and problem solving as elements in cooperative learning (first draft). Utrecht: Department of Education.

Laursen, B., & Hartup, W. W. (1989). The dynamics of preschool children's conflicts. Merrill-Palmer Quarterly, 35(3), 281-297.

Leffert, J. S., & Siperstein, G. N. (1996). Assessment of social-cognitive processes in children with mental retardation. American Journal on Mental Retardation, 100(5), 441-455.

Levin, H. S., High, W. M., Goethe, K. E., Sisson, R. A., et al. (1987). The neurobehavioral rating scale: Assessment of the behavioral sequelae of head injury by the clinician. Journal of Neurology, Neurosurgery, and Psychiatry, 50(2), 183-193.

Levine, M. J., Van Horn, K. R., & Curtis, A. B. (1993). Developmental models of social cognition in assessing psychosocial adjustments in head injury. Brain Injury, 7(2), 153-167.

Light, P. (1983). Social interaction and cognitive development: A review of post-Piagetian research. In S. Meadows (Ed.), Developing thinking (pp. 67-88). London: Methuen.

Lindow, J. A., Wilkinson, L. C., & Peterson, P. L. (1985). Antecedents and consequences of verbal disagreements during small group learning. Journal of Educational Psychology, 77, 658-667.

Longhurst, T., & Berry, G. (1975). Communication in retarded adolescents: Response to listener feedback. American Journal of Mental Deficiency, 80, 158-164.

Lougee, M. D., Grueneich, R., & Hartup, W. W. (1977). Social interaction in same- and mixed-age dyads of preschool children. Child Development, 48, 1353-1361.

Luke, J. L., & Myers, C. M. (1995). Toward peace: Using literature to aid conflict resolution. Childhood Education, 71(2), 66-69.

Lyles, S. K. (1996). Patterns and perceptions of friendship among mainstreamed intellectually impaired junior high school students and their non-handicapped peers. Unpublished doctoral dissertation, University of Manitoba, Winnipeg.

MacMillan, D. L., Meyers, C. E., & Morrison, G. M. (1980). System-identification of mildly mentally retarded children: Implications for interpreting and conducting research. American Journal of Mental Deficiency, 85(2), 108-115.

Maheady, L., Sacca, M. K., & Harper, G. F. (1988). Classwide peer tutoring with mildly handicapped high school students. Exceptional Children, 55(1), 52-59.

Mainzer, R. W. Jr., Mainzer, K. L., Slavin, R. E., & Lowry, E. (1993). What special education teachers should know about cooperative learning. Teacher Education and Special Education, 16(1), 42-50.

Marascuilo, L. A., & McSweeney, M. (1977). Nonparametric and distribution-free methods for the social sciences. Monterey, CA: Brooks/Cole.

Martin, J. (1994). Dealing with differences: A program for addressing adolescent multicultural conflict. In K. Oxenberry, K. Rigby, & P. Slee (Eds.), Children's peer relations: Cooperation and conflict - Conference proceedings (pp. 183-192). Adelaide, South Australia: University of South Australia.

Maxwell, S. E., & Delaney, H. D. (1990). Designing experiments and analyzing data: A model comparison perspective. Belmont, CA: Wadsworth.

Maynard, D. W. (1985a). How children start arguments. Language in Society, 14, 1-30.

Maynard, D. W. (1985b). On the functions of social conflict among children. American Sociological Review, 50, 207-233.

McLaughlin, H. (1969). SMOG Grading - A new readability formula. Journal of Reading, May, 639-645.

Mercer, J. R. (1971). The meaning of mental retardation. In R. Koch & J. Dobson (Eds.), The mentally retarded child and his family: A multidisciplinary handbook (pp. 23-46). New York: Brunner/Mazel.

Miller, P. M., Danaher, D. L., & Forbes, D. (1986). Sex-related strategies for coping with interpersonal conflict in children aged five and seven. Developmental Psychology, 22(4), 543-548.

Miller, S. A., & Brownell, C. A. (1975). Peers, persuasion, and Piaget: Dyadic interaction between conservers and nonconservers. Child Development, 46, 992-997.

Mugny, G., & Doise, W. (1978). Socio-cognitive conflict and structure of individual and collective performances. European Journal of Social Psychology, 8, 181-192.

Nastasi, B. K., & Clements, D. H. (1991). Research on cooperative learning: Implications for practice. School Psychology Review, 20(1), 110-131.

Neave, H. R., & Worthington, P. L. (1988). Distribution-free tests. Boston, MA: Unwin Hyman.

Neilson, I., & Dockrell, J. (1982). Cognitive tasks as interactional settings. In G. E. Butterworth & P. Light (Eds.), Social Cognition: Studies of the development of understanding (pp. 213-237). Brighton: Harvester Press.

Nicholson, M. (1991). Negotiation, agreement and conflict resolution: The role of rational approaches and their criticism. In R. Vayrynen (Ed.), New directions in conflict theory: Conflict resolution and conflict transformation (pp. 57-78). London: Sage Publications.

Nijhof, W., & Kommers, P. (1985). An analysis of cooperation in relation to cognitive controversy. In Slavin, R., Sharan, S., Kagan, S., Lazarowitz, R. H., Webb, C.,

& Schmuck, R. (Eds.), Learning to cooperate, cooperating to learn (pp. 125-145). New York: Plenum Press.

Oetting, J. B., & Rice, M. L. (1991). Influence of the social context on pragmatic skills of adults with mental retardation. American Journal on Mental Retardation, 95 (4), 435-443.

O'Keefe, B. J., & Benoit, P. J. (1982). Children's arguments. In J. R. Cox & C. A. Willard (Eds.), Advances in argumentation theory and research (pp. 154-183). Carbondale: Southern Illinois University Press.

Phelps-Terasaki, D., & Phelps-Gunn, T. (1992). Test of Pragmatic Language: Examiner's Manual. Austin, TX: PRO-ED.

Piaget, J. (1932). The moral judgement of the child. London: Kegan Paul.

Piaget, J. (1958). The growth of logical thinking from childhood to adolescence (A. Parsons & S. Seagrin, Trans.). New York: Basic Books.

Piaget, J. (1959). The language and thought of the child (3rd ed.). London: Routledge and K. Paul.

Pressley, M., & McCormick, C. B. (1995). Enhancing student motivation. In M. Pressley & C. B. McCormick (Eds.), Advanced educational psychology for educators, researchers, and policymakers (pp. 110-139). New York: HarperCollins College Publishers.

PsycLIT database (SilverPlatter 3.11) [CD-ROM]. (1995). Norwood, MA: SilverPlatter Information [Producer and Distributor].

Putnam, J. W., Rynders, J. E., Johnson, R. T., & Johnson, D. W. (1989). Collaborative skill interaction for prompting positive interactions between mentally handicapped and nonhandicapped children. Exceptional Children, 55(6), 550-557.

Renshaw, P. D., & Asher, S. R. (1982). Social competence and peer status: the distinction between goals and strategies. In K. H. Rubin & H. S. Ross (Eds.), Peer relationships and social skills in childhood (pp. 375-395). New York: Springer-Verlag.

Renshaw, P. D., & Garton, A. F. (1986). Children's collaboration and conflict in dyadic problem solving. In C. Pratt, A. F. Garton, W. E. Tunmer & A. R. Nesdale (Eds), Research issues in child development. Sydney: Allen & Unwin Australia.

Rueda, R., & Chan, K. S. (1980). Referential communication skill levels of moderately mentally retarded adolescents. American Journal of Mental Deficiency, 85, 45-52.

SAS (1990). SAS/STAT User's Guide, Version 6, Volume 1. Fourth Edition. Cary, NC: SAS Institute, Inc.

Sabsay, S., & Kernan, K. T. (1993). The nature of language impairment in Down syndrome. Topics in Language Disorders, 13(3), 20-35.

Sabsay, S., & Platt, M. (1985a). Introduction. In S. Sabsay & M. Platt (Eds.), Social setting, stigma, and communicative competence: Exploration of the conversational interactions of retarded adults (pp. 1-7). Philadelphia: John Benjamins Publishing Company.

Sabsay, S., & Platt, M. (1985b). Weaving the cloak of competence: A paradox in the management of trouble in conversations between retarded and nonretarded

interlocutors. In S. Sabsay & M. Platt, (Eds.), Social setting, stigma, and communicative competence: Exploration of the conversational interactions of retarded adults (pp. 95-116). Philadelphia: John Benjamins Publishing Company.

Sackin, S., & Thelen, E. (1984). An ethological study of peaceful associative outcomes to conflict in preschool children. Child Development, 55, 1098-1102.

Sacks, H. (1972). An initial investigation of the usability of conversational data for doing sociology. In D. Sudnow (Ed.), Studies in social interaction (pp. 31-74). New York: Free Press.

Sacks, H., Schegloff, E. A., & Jefferson, G. (1974). A simplest systematics for the organization of turn-taking in conversation. Language, 50, 696-735.

Scudder, R. R., & Tremain, D. H. (1992). Repair behaviors of children with and without mental retardation. Mental Retardation, 30(5), 277-282.

Seeley, M. S (1971). An experimental evaluation of sociodrama as a social habilitation technique for mentally retarded adolescents. (Doctoral dissertation, University of Wisconsin.) Ann Arbor, MI: University Microfilms, No. 71-28, 366.

Selman, R. L. (1980). The growth of interpersonal understanding. New York: Academic Press.

Selman, R. L., Jaquette, D., & Bruss-Saunders, E. (1979). Assessing interpersonal understanding: An interview and scoring manual. Cambridge, MA: Harvard-Judge Baker Social Reasoning Project.

Shantz, C. U. (1987). Conflicts between children. Child Development, 58, 283-305.

Shantz, C. U., & Hartup, W. W. (1992). Conflict and development: An introduction. In C. U. Shantz & W. W. Hartup (Eds.), Conflicts in child and adolescent development (pp. 1-11). New York: Cambridge University Press.

Shantz, C. U., & Shantz, D. W. (1985). Conflict between children: Social-cognitive and sociometric correlates. In M. W. Berkowitz (Ed.), Peer conflict in psychological growth: New directions for child development (pp. 3-21). San Francisco: Jossey-Bass.

Shantz, D. W. (1986). Conflict, aggression, and peer status: An observational study. Child Development, 57, 1322-1332.

Shapiro, D. A. (1989). Review of the Test of Adolescent Language - 2. In J. C. Conoley & J. J. Kramer (Eds.), The tenth mental measurements yearbook (pp. 830-833). Lincoln Nebraska: The University of Nebraska Press.

Sharan, S. (1980). Cooperative learning in small groups: Recent methods and effects on achievement, attitudes and ethnic relations. Review of Educational Research, 50(2), 241-271.

Shatles, D. (1992). Conflict resolution through children's literature. Impact II. New York, NY: New York City Board of Education. (ERIC Document Reproduction Service No. ED 344 976).

Sheldon, A. (1992). Conflict talk: Sociolinguistic challenges to self-assertion and how young girls meet them. Merrill-Palmer Quarterly, 38(1), 95-117.

Sherman, J. A., Sheldon, J. B., Harchik, A. E., Edwards, K., & Quinn, J. M. (1992). Social evaluation of behaviors comprising three social skills and a comparison of

the performance of people with and without mental retardation. American Journal on Mental Retardation, 96(4), 419-431.

Slavin, R. E. (1990). Cooperative learning: Theory, research, and practice. Englewood Cliffs, NJ: Prentice-Hall.

Slavin, R. E., Madden, N. A., & Leavey, M. (1984). Effects of cooperative learning and individualized instruction on mainstreamed students. Exceptional Children, 50(5), 434-443.

Smith, K., Johnson, D. W., & Johnson, R. T. (1981). Can conflict be constructive? Controversy versus concurrence seeking in learning groups. Journal of Educational Psychology, 73 (5), 651-663.

Snow, C. E., & Pan, B. A., (1993). Ways of analyzing the spontaneous speech of children with mental retardation: The value of cross-domain analyses. International Review of Research in Mental Retardation, 19, 163-192.

Spradlin, J. E. (1968). Environmental factors and the language development of retarded children. In S. Rosenberg & J. H. Kiplin (Eds.), Developments in applied psycholinguistic research (pp. 261-290). New York: MacMillan.

Stainback, W., & Stainback, S. (1987). Facilitating friendships. Education and Training in Mental Retardation, March, 18-25.

Stocking, S. H., Arezzo, D., & Leavitt, S. (1980). Helping kids make friends. Allen, Texas: Argus Communications.

Strayer, F. F., & Strayer, J. (1976). An ethological analysis of social agonised and dominance relations among preschool children. Child Development, 47, 980-989.

Swift, E., & Rosin, P. (1990). A remediation sequence to improve speech intelligibility for students with Down syndrome. Language, Speech, and Hearing Services in Schools, 21, 140-146.

Tannock, R. (1988). Mothers' directiveness in their interactions with their children with and without Down syndrome. American Journal on Mental Retardation, 93(2), 154-165.

Van Acker, R. (1993). Dealing with conflict and aggression in the classroom: What skills do teachers need? Teacher Education and Special Education, 16(1), 23-33.

Vuchinich, S. (1984). Sequencing and social structure in family conflict. Social Psychology Quarterly, 49(3), 217-234.

Vuchinich, S. (1987). Starting and stopping spontaneous family conflicts. Journal of Marriage and the Family, 49, 591-601.

Vygotsky, L. (1978). Mind in society. Cambridge, Mass.: Harvard University.

Wayment, H. A., & Zetlin, A. G. (1989). Coping responses of adolescents with and without mild learning handicaps. Mental Retardation, 27(5), 311-316.

Weinstein, B. D., & Bearison, D. J. (1985). Social interaction, social observation, and cognitive development in young children. European Journal of Social Psychology, 15(3), 333-343.

Wilcoxon, F. (1945). Individual comparisons by ranking methods. Biometrics, 1, 80-83.

Wiley, P. D. (1983, May). Development of strategies for coping with peer conflict in children from first through fifth grade. In R. K. Ullman (Chair), Assessment of

children's social knowledge and attitudes: Coping with peer conflict. Paper presented at the Annual Meeting of the Association for Behavior Analysis, Milwaukee.

Zetlin, A. G., & Murtaugh, M. (1988). Friendship patterns of mildly learning handicapped and nonhandicapped high school students. American Journal on Mental Retardation, 92(5), 447-454.

APPENDICES

Appendix A

Coding of Disagreements Arising in Learning Engagements

Coding of Disagreements Arising in Learning Engagements

Categories of Analysis (adapted from Eisenberg, 1992)

The coding used in the analysis of the transcribed tapes is adapted from Eisenberg (1992). For each instance of disagreement, the following components of the conflict were coded:

1. Who initiates the conflict (the intellectually disabled adolescent or the normal-progress peer);
2. Number of oppositional turns;
3. Presence or absence of negative affect (in the form of harshness of vocal tone, crying, whining, or screaming) - intellectually disabled student;
4. Presence or absence of negative affect (in the form of harshness of vocal tone, crying, whining, or screaming) - normal-progress peer;
5. Presence or absence of justification by the intellectually disabled adolescent;
6. Presence or absence of peer justification;
7. The individual taking the last verbal oppositional turn;
8. The speech act category of the opposed utterance;
9. The topic of the conflict;
10. The outcome of the dispute;
11. The type of initial opposition; including
12. Whether the opposition included an explicit negative.

Type of speech act opposed

1. **Requests for action**, including direct and indirect requests and prohibitions (e.g., "Read now" and peer responds "no");
2. **Requests for permission**, beginning with "Can I ... ?" or "Can we ... ?" (e.g., "Can I do it?" and the partner replies "it's my turn");
3. **Statements of intent**, where the opposed utterance stated a plan to perform some action (e.g., "I'm going to take the tents" and the partner responds "we already have 10 things on our list"); and
4. **Statements of fact**, which asserted a proposition that was opposed (e.g., "It said they need an interpreter" and the partner replies "no, it didn't").

Conflict topics

Eisenberg's (1992) "conflict topics" were of limited applicability for the proposed study, as her coding of conflict topic was used to analyze conversational interactions arising between young children and their mothers. For the purpose of coding "conflict topic" in the problem-solving task chosen for the current study, the following categories were employed:

1. **Conflict regarding lesson content**, disputes pertaining to information contained within the lesson itself;
2. **Conflict regarding lesson process** (lesson housekeeping), disagreements involving how to run the lesson (e.g., disagreement regarding who reads the computer screen, who inputs the answer on the keyboard);

3. **Assistance**, conflicts regarding demands/requests for aid or independence; and
4. **Other**, conflicts that do not fall in any of the aforementioned categories.

Conflict outcomes

Disagreement termination formats include:

1. The intellectually disabled adolescent submitted;
2. The normal-progress peer submitted;
3. The two participants compromised (that is, agreed on a position/solution/strategy somewhat different than either of their original positions); or
4. Standoff.

Submission: An instance of submission will be coded if one participant gave in or if a speaker acknowledged the opponent's submission.

Standoff: A standoff will be coded if a change of conversational topic occurred without either participant clearly submitting. If the conflict episode terminated in a standoff, coders will note who held the last oppositional turn.

Type of initial opposition.

Using Eisenberg's (1992) scheme to code initial oppositions, the coder will note whether an explicit "no" was said by the opposer and categorize the entire opposing turn in the following way:

1. **Simple No**, The opposer says "no", "uh-uh", or "don't" (or "yes" in response to a negative sentence), and nothing more.
2. **Indirect No**: The opposer does not explicitly say "no", but the response indicates opposition and does not contain a justification or alternative. (e.g., one student says "they'll need a British flag", and the other replies "I doubt it").
3. **Justification**: The opposer supplies a reason or explanation for the opposition or disagreement (e.g., one student says, "Let me read" and the other replies "I can read faster");
4. **Alternative**: The opposer suggests an alternative to the partner's suggestion, request, or version of the truth, including attempts to make a deal (Eisenberg, 1992, p. 30); (e.g., one student says: "Let me read" while the other says "Here, you use the keyboard").
5. **Delay/distraction**: The opposer tries to delay compliance or redirect the partner's attention (e.g., one student says "Let me read" and the opposer replies "Wait a minute");
6. **Question/challenge:** The opposer initially implies opposition by asking a question such as "Are you sure?", "Is it really?", or "Why?" before starting the opposition more directly later in the episode (e.g., one student says "I think we need a Coleman stove" and the other replies "Really?" and the first student then says "yeah", to which the second student replies, "I don't think they made Coleman stoves back in 1875").

Appendix B

Consent of Participating School Divisions

201
River East School Division No.9
589 ROCH STREET, WINNIPEG, MANITOBA, CANADA R2K 2P7 (204) 667-7130
FAX (204) 661-5618

October 17, 1995

MEMORANDUM

To: J. Alexa Okrainec
256 Scotia Street
Winnipeg, Manitoba R2V 1V9

From: E.G. Wall
Superintendent/CEO
River East School Division

Subject: Research Application Form - Ph.D. Dissertation

****

In response to your letter received on September 18,. 1995, requesting permission to conduct research in River East School Division associated with your Ph. D. Dissertation, please be advised that approval is granted.

It is understood that all participation is voluntary and that parents of involved students are notified and have provided permission for their son/daughter to take part. It is also understood that you will have guaranteed total confidentiality and professionalism in your research.

We wish you well in this interesting study.

EGW:li

THE WINNIPEG SCHOOL DIVISION NO. 1
RESEARCH, PLANNING AND TECHNOLOGY
1180 NOTRE DAME AVENUE, WINNIPEG, MANITOBA R3E 0P2
TELEPHONE: (204) 775 - 0231
FAX (204) 775 - 1569

DOUGLAS R. EDMOND
DIRECTOR OF RESEARCH, PLANNING AND TECHNOLOGY

November 2, 1995

J. Alexa Okrainec
256 Scotia Street
Winnipeg, Manitoba
R2V 1V9

Dear Ms. Okrainec:

Re: Research Request: Conversational Interactions between Intellectually Disabled and Normal Adolescents during a Problem-Solving Task

This letter is to inform you that the appropriate officials of the Winnipeg School Division and the Research Advisory Committee have reviewed and approved the above-mentioned research project in principle.

Please contact Mr. John VanWalleghem, Service Director - Special Education at 774-4525 do discuss your data collection procedures.

Your research request will receive final approval once John VanWalleghem confirms that your data collection requirements can be met by the Division.

Please contact me if you have any questions.

Regards,

Douglas R. Edmond,
Chair,
Research Advisory Committee

p.c. J. VanWalleghem
Research Advisory Committee

WINNIPEG SCHOOL DIVISION NO. 1
Special Education Department
Memorandum

TO: Junior High Special Education Resource Teachers

FROM: **John VanWalleghem** **DATE: Nov. 9, 1995**
Service Director

SUBJECT: Research Study
Conversational Interactions Between Intellectually Disabled and Normal Adolescents During a Problem-Solving Task

The Division has permitted Alexa Okrainec to conduct her doctoral research study in our division. Ms. Okrainec is a doctoral candidate in Educational Psychology at the University of Manitoba. Her research will examine verbal disagreements that arise during learning tasks and how these disagreements are negotiated. The expectation is that there will be a difference in both the quantity and quality of strategies used when comparing students with intellectual disabilities to their non-disabled peers. The division always tries to cooperate with research like this, especially when the results have implications for educators. Ms. Okrainec will make her results available to anyone in the division who is interested.

Ms. Okrainec needs to identify 22 students who have intellectual disabilities who would be willing to participate in the study. Subsequently, she will need the same number of non-disabled, same-gender peers to participate in the study. We request your assistance in identifying those students and then arranging the research activities..

Please think about those students in your program who meet the following criteria:

- 12-14 years of age
- having mild general intellectual disability
  (This might be students who are identified as having mild mental retardation or who are participating in a developmental education program due to a general learning problem. It would not include students participating in a developmental education program due primarily to social factors such as migrancy, socio-economic factors, cultural differences, etc.)
- do not have chronic hearing loss or major visual impairment;
- do not have psycho-social disorders including behavior disorders;
- are intelligible verbal communicators;
- have English as a first language; and
- are integrated academically for at least one subject area.

Ms. Okrainec requires 11 males and 11 females.

Student participation in the study would involve:

- administration of two language tests (about 1.5 hours over two visits);
- participation in a computer learning activity (about a half hour).

These activities would take place at school at a time that is convenient for the school and the participants. It will make things easier if Ms. Okrainec can have private access to a computer in the school for the computer learning activity. However, this should not be a limiting factor in whether or not students are chosen. Ms. Okrainec will arrange to bring a laptop if necessary.

For those of your students who meet the criteria, please consider whether they and their parent/guardian would consent to participate in the study. If you think they would, please ask the student and parent/guardian whether it is alright for Ms. Okrainec to give them a phone call to discuss participation further.

Ms. Okrainec would phone the parent/guardian to explain the study completely and then mail a permission form to those who agreed to participate. No student will be committed to participating until the parent/guardian returns the signed permission form.

Once the required number of students with intellectual disabilities are identified, Ms. Okrainec will be in contact with you to identify non-disabled, same-gender peers who would be willing to participate in the study. These must be students who are randomly selected from among the peers in the integrated class(es). Again, their parents will be contacted and given the opportunity to choose whether to participate or not. These students will participate in the same activities.

Please phone the Special Education Department at 774-4525 with the list of students and parents/guardians who are willing to be contacted by Ms. Okrainec. Provide the student's name, sex and birthdate and the parent/guardian's name and phone number. Ms. Okrainec will contact parents/guardians relatively quickly. Once she identifies 22 participants, she will contact any remaining parents/guardians on the list to inform them that their child's participation is not needed but their willingness is appreciated.

We would like to complete this initial step as soon as possible. Ms. Okrainec will not be given final authority to proceed with the study until suitable participants are identified. Please provide your list of willing students to our office by Monday November 20th. If we do not hear from you, we may call to follow up.

If you have any questions, please call Ms. Okrainec at 338-9724 or 474-8983. If any of your students are slected for participation, Ms. Okrainec will be in touch with you.

Thank you for helping with this research.

pc: Principals

Appendix C

Project Description and Consent Forms

Faculty of Education; The University of Manitoba,
Winnipeg, Canada R3T 2N2 Ph: 474-8983 or 338-9724
Alexa Okrainec, M. CL. SC. (Principal Investigator)

Project Description: Conversational Interaction of Students during a Problem-Solving Task

Dear Parent/Guardian:

A research team from the University of Manitoba is conducting a study to learn more about students' conversational interactions during problem-solving tasks and learning activities. Although the study will build on existing research which supports the importance of conversational interactions for learning, it has been designed to contribute new information to this area. The results of the study will be of interest to other researchers and, in particular, to educational practitioners. As your child is eligible to take part in the project, this description is being provided to seek your written consent for his/her participation.

During the study, I will be visiting your child's school and will be working with those students whose participation has been approved by their parent/guardian. It is anticipated that students taking part in the study will have three to five brief (approximately 30 to 45 minute) educational sessions with me. During these visits, your child will:

(1) complete a language evaluation. Two language tests which have been approved for educational settings will be administered. These tests are:
- (i.) the Test of Adolescent and Adult Language (3rd ed.); and
- (ii.) the Test of Pragmatic Language.

(2) work with a fellow student at problem-solving activities chosen from the social studies curriculum. An educationally-approved computer exercise called 'Fort Walsh' will be used.

There is no known risk of discomfort or harm for any of the students taking part in the study. We anticipate that the students will enjoy the activities chosen for the project. These tests and activities will be audio and videotaped, and notes will be taken.

The data that I will be collecting throughout the study will be analyzed in considerable detail for my Ph. D. dissertation. You and your child's identity will not be revealed in the reporting of results and the highest standards of confidentiality will be maintained at all times, both during the project and upon its completion. Once the study has ended, I would like to retain the audio and videotapes for future use. The analysis of students' conversational interactions will remain an area of research interest for me, hence I am hopeful that you will consider granting me permission to keep the tapes. Otherwise your child's tapes will be destroyed when the project is finished.

Your child's participation in this research is entirely voluntary and does not affect the services that he/she is receiving or may receive at school. Your child can withdraw from the study at any time without penalty to you or your child. At the conclusion of the study, a summary of the outcome of the project will be available for those parents/guardians whose child participated.

If you have any questions about the research project, please feel free to contact me:

Alexa Okrainec, M. CL. SC., SLP(C); CCC-SLP;
Speech-language Pathologist
Principal Investigator;
University of Manitoba, Faculty of Education; Room 13lJ
Winnipeg; R3T 2N2 Ph: 474-8983 or 338-9724.

Or my advisor:

Dr. M. Jeffry Hughes, Ph. D.
University of Manitoba, Faculty of Education (Room 244)
Winnipeg; R3T 2N2 PH. 474-9023 or 474-9018

Sincerely,

Alexa Okrainec, M. CL. SC., SLP(C), CCC-SLP

Principal Investigator

Faculty of Education; The University of Manitoba,
Winnipeg, Canada R3T 2N2
Alexa Okrainec, M. CL. SC. (Principal Investigator)
Ph: 474-8983 or 338-9724

Letter of Agreement

I, _____ (parent/guardian) give my consent for _____ (child's name), to take part in a research study to learn more about the language skills and conversational interactions of students during problem solving tasks. I also give my permission for the results of this study to be used in research presentations or publications as long as the identity of my child or family is not revealed. I understand that all information will be remain confidential.

I have read the description of the study and understand the procedures involved. The details of this study have been explained to me and I understand that participation will involve having researchers taking notes and taping activity sessions of my child at the school. I also understand that my child can withdraw from this study at any time without penalty.

_____
Date

_____ _____
Parent/Guardian's Signature Witness

****

I,_____ do not wish to have

_____ (child's name) participate in the research study,

and I understand that failure to participate does not affect his/her educational program.

_____
Date

_____ _____
Parent/Guardian's Signature Witness

Faculty of Education; The University of Manitoba,
Winnipeg, Canada R3T 2N2
Alexa Okrainec, M. CL. SC. (Principal Investigator)
Ph: 474-8983 or 338-9724

Disposition of Audio and Videotapes

I, _____ (parent/guardian) give my consent for Alexa Okrainec to retain the audio and videotapes of my child, _____ (child's name), that were collected for the research study "Conversational Interactions of Students during a Problem-Solving Task". I understand that these tapes will be used to learn more about the language skills and conversational interactions of students. I consent to the use of these tapes for future re-analysis of the data and for educational purposes.

_____
Date

_____ _____
Parent/Guardian's Signature Witness

****

I, _____ do not give my consent for Alexa Okrainec to keep the audiotapes and videotapes of _____ (child's name) that were collected for the research study "Conversational Interactions of Students during a Problem-Solving Task". I prefer to have the tapes destroyed after the study is completed.

_____
Date

_____ _____
Parent/Guardian's Signature Witness

Appendix D

Instructions to Participants

Instructions to the Student Pairs Engaging in the Learning Task

"Today we're going be working together at the computer. You're going to be doing a social studies lesson called Fort Walsh. It's a computer game based on the origin of Fort Walsh. Fort Walsh is a North-West Mounted Police fort built in 1875. To play the game, you read aloud what is on the computer screen. You use the space bar (here), enter key, and arrows to go through the game. Together, as you play the game, you must make decisions and choices. Whenever the two of you must answer a question or make a choice, discuss between you the possible answer before deciding together what your choice is. Remember to talk about the reasons for your answers. I want you to keep playing the game until I tell you it's time to stop. Do you have any questions? [pause] Go ahead".

First Prompt

Remember I want both of you to talk about your reasons as you go through the activity. Okay, remember to discuss your answers.

Second Prompt

Okay, remember, - Here's what you're working on. You're making some choices here from the list. I want you to talk about your reasons. I want you to talk about your reasons, (name), and (name) I want you to talk about your reasons as well. Are you ready? You can carry on.

Appendix E

Conflict Examples

Example 1

0 Peer: 'Kay, your turn to read.

1 I.D.: No, your turn. Go on.

0 Peer: [Begins to read] "In this...".

****

Initiator - The intellectually disabled (I.D.)

Number of Turns - 1

Negative Affect - Absent for both students

Justification - No justification (both)

Last Turn - Taken by the intellectually disabled student

Speech Act - Request for action

Dispute Topic - Lesson process

Dispute Outcome - Normal-progress peer submits

Initial Opposition - Alternative

Explicit Negative - Present

Example 2

0 Peer: I think we'll just skip [hunting] this time eh?

1 I.D.: No?

0 Peer: Want to go hunt again? Well, I think, I don't know if it no - okay.

****

Initiator - Intellectually disabled student

Number of Turns - 1

Negative Affect - Absent for both students

Justification - Absent for both students

Last Turn - Intellectually disabled student

Speech Act - Statement of intent

Dispute Topic - Lesson content

Dispute Outcome - Normal-progress peer submits

Initial Opposition - Simple no

Explicit Negative - Present

Example 3

0 I.D.: [Let's take] tools and rope.

1 Peer: So?

2 I.D.: So we can make stuff like weapons.

3 Peer: Well, why not just bring weapons?

0 I.D.: Oh.

****

Initiator	-	Normal-progress peer
Number of Turns	-	3
Negative Affect	-	Present for the normal-progress peer, absent for the intellectually disabled student
Justification	-	Present for both students
Last Turn	-	Normal-progress peer
Speech Act	-	Request for action
Dispute Topic	-	Lesson content
Dispute Outcome	-	Standoff
Initial Opposition	-	Question/challenge
Explicit Negative	-	Absent

Example 4

0 I.D.: And you get the tongue. [referring to the buffalo tongue]

1 Peer: We didn't get the tongue. I have one. (laughs) 0 [begins to read computer screen...]

****

Initiator	-	Normal-progress peer
Number of Turns	-	1
Negative Affect	-	Present for the normal-progress student, Absent for the intellectually disabled student
Justification	-	Present (Normal-progress student), Absent (Intellectually disabled student)
Last Turn	-	Taken by the normal-progress peer
Speech Act	-	Statement of fact
Dispute Topic	-	Lesson content
Dispute Outcome	-	Standoff
Initial Opposition	-	Justification
Explicit Negative	-	Absent

Example 5

0 Peer: [Let's] reason with them [the Indians].

1 I.D.: Hope for a miracle. (laughs)

2 Peer: Reason, that one? [moves cursor to "reason with the Indians"]

3 I.D.: (mumbles - no)

4 Peer: You want to reason with them or hope for a miracle?

5 I.D.: I don't know. What are the // choices.

6 Peer: If we if you reason with them you can give them something.

0 I.D.: Okay.

****

Initiator	-	The intellectually disabled student
Number of Turns	-	6
Negative Affect	-	Absent for both students
Justification	-	The normal-progress peer provides a reason during the dispute, but the intellectually disabled student does not
Last Turn	-	Taken by the normal-progress peer
Speech Act	-	Request for action
Dispute Topic	-	Lesson content
Dispute Outcome	-	Intellectually disabled student submits
Initial Opposition	-	Alternative
Explicit Negative	-	Absent

Note: // - instances of simultaneous talk

Example 6

0 I.D.: "It's too dangerous". Number 2.

1 Peer: (whispers) "Can we think about it?" I like number 1.

0 I.D.: Okay.

****

Initiator	-	The normal-progress peer
Number of Turns	-	1
Negative Affect	-	Absent for both students
Justification	-	Absent for both students
Last Turn	-	Taken by the normal-progress peer
Speech Act	-	Statement of intent
Dispute Topic	-	Lesson content
Dispute Outcome	-	Intellectually disabled student submits
Initial Opposition	-	Alternative
Explicit Negative	-	Absent

Example 7

0 I.D.: Um, how about "continue ahead"?

1 Peer: Continue ahead though and you go through there and you probably use more time.

0 I.D.: Yeah, okay.

****

Initiator	-	The normal-progress peer
Number of Turns	-	1
Negative Affect	-	Absent for both students
Justification	-	Present for the normal-progress peer
Last Turn	-	Taken by the normal-progress peer
Speech Act	-	Request for action
Dispute Topic	-	Lesson content
Dispute Outcome	-	Intellectually disabled student submits
Initial Opposition	-	Justification
Explicit Negative	-	Absent

Example 8

Peer: (reading "you decide that he [Jerry] is right and you go to hunt; wrong and you won't go")

0 I.D.: They got - we got food though.

1 Peer: Yeah, but if we go to hunt then we got more food but we lose more time again.

2 I.D.: Ya, so let's take the food.

0 Peer: Ya, let's not go.

****

Initiator	-	The normal-progress peer
Number of Turns	-	2
Negative Affect	-	Absent for both students
Justification	-	Present for the normal-progress peer, but Absent for the intellectually disabled student
Last Turn	-	Taken by the intellectually disabled student
Speech Act	-	Statement of fact
Dispute Topic	-	Lesson content
Dispute Outcome	-	Normal-progress peer submits
Initial Opposition	-	Alternative
Explicit Negative	-	Absent

Example 9

0 Peer: You read now. Come on, just read.

1 I.D.: Why? I don't wanna read.

0 Peer: [begins to read]

****

Initiator	-	The intellectually disabled student
Number of Turns	-	1
Negative Affect	-	Absent for both students
Justification	-	Present for the intellectually disabled student
Last Turn	-	Taken by the intellectually disabled student
Speech Act	-	Request for action
Dispute Topic	-	Lesson process
Dispute Outcome	-	Normal-progress peer submits
Initial Opposition	-	Question/challenge
Explicit Negative	-	Absent

Example 10

0 I.D.: How about canoe?

1 Peer: Did we ever use the canoe?

2 I.D.: No.

3 Peer: Oh.

4 I.D.: Like - there was no water.

5 Peer: Let's just take the, for sure, // tents.

6 I.D.: Let's take the canoe and we'll go farther. It says they couldn't go farther.

0 Peer: Okay.

****

Initiator	-	The normal-progress peer
Number of Turns	-	6
Negative Affect	-	Present for both students
Justification	-	Present for the intellectually disabled student, but Absent for the normal-progress peer
Last Turn	-	Taken by the intellectually disabled student
Speech Act	-	Request for action
Dispute Topic	-	Lesson content
Dispute Outcome	-	Normal-progress peer submits
Initial Opposition	-	Question/challenge
Explicit Negative	-	Absent

Note: // - instances of simultaneous talk

Example 11

0 Peer: Let's build our fort here.

1 I.D.: Bu-but do you remember when we were, the fights?

2 Peer: But we have a flag this time so.

0 I.D.: Oh, yeah.

****

Initiator	-	The intellectually disabled student
Number of Turns	-	2
Negative Affect	-	Present for both students
Justification	-	Present for both students
Last Turn	-	Taken by the normal-progress peer
Speech Act	-	Request for action
Dispute Topic	-	Lesson content
Dispute Outcome	-	Intellectually disabled student submits
Initial Opposition	-	Question/challenge
Explicit Negative	-	Absent

Example 12

0 Peer: Go to the side, next one.

1 I.D.: Wait - wait, we can't actually do that.

0 Peer: Oh, we're finished now? Okay. [starts to read]

****

Initiator	-	The intellectually disabled student
Number of Turns	-	1
Negative Affect	-	Present for the intellectually disabled student only
Justification	-	Present for the intellectually disabled student
Last Turn	-	Taken by the intellectually disabled student
Speech Act	-	Request for action
Dispute Topic	-	Lesson content
Dispute Outcome	-	Normal-progress peer submits
Initial Opposition	-	Justification
Explicit Negative	-	Absent

Example 13

0 I.D.: I think "it's too dangerous".

1 Peer: (whispers) I think it's we go we "get more men" 'cause then it won't be dangerous.

0 I.D.: (whispers) okay.

****

Initiator	-	The normal-progress student
Number of Turns	-	1
Negative Affect	-	Absent for both students
Justification	-	Present for the normal-progress student
Last Turn	-	Taken by the normal-progress peer
Speech Act	-	Statement of intent
Dispute Topic	-	Lesson content
Dispute Outcome	-	Intellectually disabled student submits
Initial Opposition	-	Alternative
Explicit Negative	-	Absent

Example 14

0 Peer: Coleman stove - do you think they need a stove?

1 I.D.: No.

2 Peer: How about like to make their food. How are they going to bake it?

3 I.D.: Oh yeah.

4 Peer: So you want the stove?

0 I.D.: Uh huh.

****

Initiator - The intellectually disabled student

Number of Turns - 4

Negative Affect - Absent for both students

Justification - Present for the normal-progress peer, but
Absent for the intellectually disabled student

Last Turn - Taken by the normal-progress student

Speech Act - Request for action

Dispute Topic - Lesson content

Dispute Outcome - Intellectually disabled student submits

Initial Opposition - Simple no

Explicit Negative - Present

Example 15

Peer: We can have one more. [i.e., one more item on the list of things to take]

0 I.D.: We need to have wagons.

1 Peer: Yeah, but we also had the canoe last time and the interpreter.

2 I.D.: Unless we want to take the canoe?

3 Peer: Wait a minute. Remember, along the way we got one of these, the interpreter?

4 I.D.: Yeah.

5 Peer: So we can probably take something else.

6 I.D.: We don't need a barber. We can take lumber and nails.

7 Peer: Okay, then we are allowed one other thing. It is either the canoe or the wagons?

0 I.D.: Canoe

****

Initiator	-	Normal-progress peer
Number of Turns	-	7
Negative Affect	-	Absent for both participants
Justification	-	The normal-progress peer provides reasons during the dispute, but the intellectually disabled student does not
Last Turn	-	Taken by the normal-progress peer
Speech Act	-	request for action
Dispute Topic	-	Lesson content

Dispute Outcome	-	Intellectually disabled student submits
Initial Opposition	-	Alternative
Explicit Negative	-	Absent

Appendix F

Record of the Performance of Each Dyad

Table F-1: Raw Data

[a]OBS	DYAD	EXCHANGE	INITIATOR	NUMBER OF TURNS	AFFECT NORMAL	AFFECT [b]ID	JUSTIFI-CATION [b]ID	JUSTIFI-CATION NORMAL	LAST TURN	SPEECH ACT	DISPUTE TOPIC
1	1	1	Normal	1	Absent	Absent	Absent	Absent	Disabled	Request/Action	Lesson Process
2	1	2	Disabled	3	Present	Absent	Present	Present	Disabled	Request/Action	Lesson Process
3	1	3	Disabled	1	Absent	Absent	Present	Absent	Disabled	Request/Action	Lesson Process
4	1	4	Normal	1	Absent	Absent	Absent	Absent	Normal	Request/Action	Lesson Content
5	1	5	Normal	4	Absent	Absent	Absent	Present	Normal	Request/Action	Lesson Process
6	1	6	Disabled	1	Absent	Absent	Present	Absent	Disabled	Request/Action	Lesson Content
7	1	7	Disabled	7	Present	Present	Present	Present	Disabled	Request/Action	Lesson Content
8	1	8	Normal	2	Absent	Absent	Absent	Absent	Disabled	Request/Action	Lesson Content
9	1	9	Normal	2	Absent	Absent	Absent	Absent	Disabled	Request/Action	Lesson Process
10	1	10	Disabled	3	Absent	Absent	Present	Absent	Disabled	Request/Action	Lesson Process
11	2	1	Disabled	2	Absent	Absent	Absent	Absent	Normal	Request/Action	Lesson Content
12	2	2	Disabled	3	Absent	Absent	Present	Absent	Disabled	Request/Action	Lesson Content
13	2	3	Disabled	1	Absent	Absent	Absent	Absent	Disabled	Statement Intent	Lesson Process
14	2	4	Normal	5	Absent	Absent	Absent	Present	Normal	Request/Action	Lesson Content
15	2	5	Disabled	3	Present	Present	Absent	Absent	Disabled	Request/Action	Lesson Process
16	2	6	Normal	2	Absent	Absent	Absent	Present	Disabled	Statement Intent	Lesson Process
17	3	1	Normal	1	Present	Absent	Absent	Present	Normal	Request/Action	Lesson Process
18	3	2	Disabled	1	Absent	Absent	Absent	Present	Normal	Statement Intent	Lesson Content
19	3	3	Normal	1	Absent	Absent	Absent	Present	Normal	Request/Action	Lesson Content
20	3	4	Normal	1	Absent	Absent	Absent	Absent	Normal	Request/Action	Lesson Content
21	3	5	Normal	2	Absent	Absent	Absent	Present	Disabled	Statement Fact	Lesson Content
22	3	6	Normal	1	Absent	Absent	Absent	Present	Normal	Statement Intent	Lesson Content
23	3	7	Disabled	1	Absent	Absent	Absent	Absent	Disabled	Statement Fact	Lesson Content
24	3	8	Normal	2	Absent	Absent	Present	Absent	Disabled	Statement Fact	Lesson Process
25	3	9	Normal	5	Absent	Present	Present	Present	Normal	Statement Intent	Lesson Content
26	3	10	Normal	1	Absent	Absent	Absent	Absent	Normal	Statement Intent	Lesson Content
27	3	11	Disabled	2	Absent	Present	Absent	Present	Normal	Statement Fact	Lesson Content
28	3	12	Normal	1	Absent	Absent	Absent	Absent	Normal	Request/Action	Lesson Content
29	3	13	Normal	1	Absent	Absent	Absent	Present	Normal	Request/Action	Lesson Content
30	4	1	Normal	3	Absent	Absent	Present	Present	Disabled	Request/Action	Lesson Process
31	4	2	Normal	3	Present	Absent	Absent	Absent	Normal	Request/Action	Lesson Content
32	4	3	Normal	8	Absent	Absent	Absent	Present	Normal	Request/Action	Lesson Content
33	4	4	Disabled	2	Present	Absent	Absent	Absent	Normal	Request/Action	Lesson Content
34	4	5	Normal	2	Present	Absent	Present	Present	Disabled	Request/Action	Lesson Content
35	4	6	Normal	3	Present	Absent	Present	Present	Normal	Request/Action	Lesson Content

[a]OBS	DISPUTE OUTCOME	INITIAL OPPOSE	EXPLICIT NEGATIVE	[b]ID [c]TOPL RAW	[b]ID [c]TOPL [j]%ILE	[b]ID [c]TOPL QUOTIENT	[b]ID [c]TOPL [e]AE (mos.)	[b]ID [d]TOAL-3 TOTAL QUOTIENT	[b]ID [d]TOAL-3 LISTENING QUOTIENT	[b]ID [d]TOAL-3 SPEAKING QUOTIENT	[b]ID [d]TOAL-3 READING QUOTIENT
1	Normal Submits	Indirect No	Absent	30	.	.	87	52	58	64	58
2	Normal Submits	Indirect No	Absent	30	.	.	87	52	58	64	58
3	Normal Submits	Justification	Absent	30	.	.	87	52	58	64	58
4	Standoff	Simple No	Present	30	.	.	87	52	58	64	58
5	Disabled Submits	Delay/Distract	Absent	30	.	.	87	52	58	64	58
6	Normal Submits	Alternative	Absent	30	.	.	87	52	58	64	58
7	Normal Submits	Alternative	Absent	30	.	.	87	52	58	64	58
8	Standoff	Quest/Challenge	Absent	30	.	.	87	52	58	64	58
9	Normal Submits	Delay/Distract	Absent	30	.	.	87	52	58	64	58
10	Standoff	Justification	Absent	30	.	.	87	52	58	64	58
11	Disabled Submits	Delay/Distract	Absent	39	.	.	162	65	94	73	64
12	Standoff	Alternative	Absent	39	.	.	162	65	94	73	64
13	Standoff	Delay/Distract	Present	39	.	.	162	65	94	73	64
14	Disabled Submits	Alternative	Absent	39	.	.	162	65	94	73	64
15	Normal Submits	Indirect No	Absent	39	.	.	162	65	94	73	64
16	Normal Submits	Justification	Present	39	.	.	162	65	94	73	64
17	Disabled Submits	Delay/Distract	Absent	30	.	.	87	49	58	61	49
18	Disabled Submits	Delay/Distract	Absent	30	.	.	87	49	58	61	49
19	Disabled Submits	Quest/Challenge	Absent	30	.	.	87	49	58	61	49
20	Standoff	Delay/Distract	Absent	30	.	.	87	49	58	61	49
21	Standoff	Justification	Absent	30	.	.	87	49	58	61	49
22	Disabled Submits	Alternative	Absent	30	.	.	87	49	58	61	49
23	Disabled Submits	Simple No	Present	30	.	.	87	49	58	61	49
24	Normal Submits	Quest/Challenge	Present	30	.	.	87	49	58	61	49
25	Disabled Submits	Alternative	Absent	30	.	.	87	49	58	61	49
26	Disabled Submits	Delay/Distract	Absent	30	.	.	87	49	58	61	49
27	Disabled Submits	Indirect No	Absent	30	.	.	87	49	58	61	49
28	Disabled Submits	Alternative	Absent	30	.	.	87	49	58	61	49
29	Disabled Submits	Alternative	Absent	30	.	.	87	49	58	61	49
30	Normal Submits	Justification	Absent	34	.	.	105	64	79	70	70
31	Disabled Submits	Simple No	Present	34	.	.	105	64	79	70	70
32	Disabled Submits	Alternative	Absent	34	.	.	105	64	79	70	70
33	Disabled Submits	Alternative	Absent	34	.	.	105	64	79	70	70
34	Standoff	Justification	Absent	34	.	.	105	64	79	70	70
35	Standoff	Quest/Challenge	Absent	34	.	.	105	64	79	70	70

[a]OBS	[b]ID [d]TOAL-3 WRITING QUOTIENT	[b]ID [d]TOAL-3 SPOKEN [i]LANG. QUOTIENT	[b]ID [d]TOAL-3 WRITTEN [i]LANG. QUOTIENT	[b]ID [d]TOAL-3 [f]VOCAB. QUOTIENT	[b]ID [d]TOAL-3 GRAMMAR QUOTIENT	[b]ID [d]TOAL-3 [g]REC. [i]LANG. QUOTIENT	[b]ID [d]TOAL-3 [h]EXP. [i]LANG. QUOTIENT	NORMAL [c]TOPL RAW	NORMAL [c]TOPL [j]%ILE	NORMAL [c]TOPL QUOTIENT	NORMAL [c]TOPL [a]AE (mos.)
1	55	57	52	52	57	53	55	40	.	.	174
2	55	57	52	52	57	53	55	40	.	.	174
3	55	57	52	52	57	53	55	40	.	.	174
4	55	57	52	52	57	53	55	40	.	.	174
5	55	57	52	52	57	53	55	40	.	.	174
6	55	57	52	52	57	53	55	40	.	.	174
7	55	57	52	52	57	53	55	40	.	.	174
8	55	57	52	52	57	53	55	40	.	.	174
9	55	57	52	52	57	53	55	40	.	.	174
10	55	57	52	52	57	53	55	40	.	.	174
11	49	82	52	63	70	77	57	38	46	98	150
12	49	82	52	63	70	77	57	38	46	98	150
13	49	82	52	63	70	77	57	38	46	98	150
14	49	82	52	63	70	77	57	38	46	98	150
15	49	82	52	63	70	77	57	38	46	98	150
16	49	82	52	63	70	77	57	38	46	98	150
17	58	55	48	57	47	48	55	40	.	.	174
18	58	55	48	57	47	48	55	40	.	.	174
19	58	55	48	57	47	48	55	40	.	.	174
20	58	55	48	57	47	48	55	40	.	.	174
21	58	55	48	57	47	48	55	40	.	.	174
22	58	55	48	57	47	48	55	40	.	.	174
23	58	55	48	57	47	48	55	40	.	.	174
24	58	55	48	57	47	48	55	40	.	.	174
25	58	55	48	57	47	48	55	40	.	.	174
26	58	55	48	57	47	48	55	40	.	.	174
27	58	55	48	57	47	48	55	40	.	.	174
28	58	55	48	57	47	48	55	40	.	.	174
29	58	55	48	57	47	48	55	40	.	.	174
30	58	72	60	67	65	72	60	37	40	96	138
31	58	72	60	67	65	72	60	37	40	96	138
32	58	72	60	67	65	72	60	37	40	96	138
33	58	72	60	67	65	72	60	37	40	96	138
34	58	72	60	67	65	72	60	37	40	96	138
35	58	72	60	67	65	72	60	37	40	96	138

[a]OBS	NORMAL [d]TOAL-3 TOTAL QUOTIENT	NORMAL [d]TOAL-3 LISTENING QUOTIENT	NORMAL [d]TOAL-3 SPEAKING QUOTIENT	NORMAL [d]TOAL-3 READING QUOTIENT	NORMAL [d]TOAL-3 WRITING QUOTIENT	NORMAL [d]TOAL-3 SPOKEN [l]LANG. QUOTIENT	NORMAL [d]TOAL-3 WRITTEN [l]LANG. QUOTIENT	NORMAL [d]TOAL-3 [f]VOCAB. QUOTIENT	NORMAL [d]TOAL-3 GRAMMAR QUOTIENT	NORMAL [d]TOAL-3 [g]REC. [l]LANG. QUOTIENT	NORMAL [d]TOAL-3 [h]EXP. [l]LANG. QUOTIENT	[b]ID [c]TOPL AGE (mos.)
1	85	94	70	103	82	80	92	85	87	98	73	172
2	85	94	70	103	82	80	92	85	87	98	73	172
3	85	94	70	103	82	80	92	85	87	98	73	172
4	85	94	70	103	82	80	92	85	87	98	73	172
5	85	94	70	103	82	80	92	85	87	98	73	172
6	85	94	70	103	82	80	92	85	87	98	73	172
7	85	94	70	103	82	80	92	85	87	98	73	172
8	85	94	70	103	82	80	92	85	87	98	73	172
9	85	94	70	103	82	80	92	85	87	98	73	172
10	85	94	70	103	82	80	92	85	87	98	73	172
11	111	94	115	106	124	105	117	110	112	100	122	189
12	111	94	115	106	124	105	117	110	112	100	122	189
13	111	94	115	106	124	105	117	110	112	100	122	189
14	111	94	115	106	124	105	117	110	112	100	122	189
15	111	94	115	106	124	105	117	110	112	100	122	189
16	111	94	115	106	124	105	117	110	112	100	122	189
17	117	118	115	109	118	118	115	113	120	115	118	180
18	117	118	115	109	118	118	115	113	120	115	118	180
19	117	118	115	109	118	118	115	113	120	115	118	180
20	117	118	115	109	118	118	115	113	120	115	118	180
21	117	118	115	109	118	118	115	113	120	115	118	180
22	117	118	115	109	118	118	115	113	120	115	118	180
23	117	118	115	109	118	118	115	113	120	115	118	180
24	117	118	115	109	118	118	115	113	120	115	118	180
25	117	118	115	109	118	118	115	113	120	115	118	180
26	117	118	115	109	118	118	115	113	120	115	118	180
27	117	118	115	109	118	118	115	113	120	115	118	180
28	117	118	115	109	118	118	115	113	120	115	118	180
29	117	118	115	109	118	118	115	113	120	115	118	180
30	105	100	94	106	118	97	113	105	105	103	107	170
31	105	100	94	106	118	97	113	105	105	103	107	170
32	105	100	94	106	118	97	113	105	105	103	107	170
33	105	100	94	106	118	97	113	105	105	103	107	170
34	105	100	94	106	118	97	113	105	105	103	107	170
35	105	100	94	106	118	97	113	105	105	103	107	170

[a]OBS	[b]ID [d]TOAL-3 AGE (mos.)	NORMAL [c]TOPL AGE (mos.)	NORMAL [d]TOAL-3 AGE (mos.)	[b]ID GRADE	NORMAL GRADE	SEX	DIFFERENCE SCORE [c]TOPL RAW	DIFFERENCE [d]TOAL-3 QUOTIENT	DIFFERENCE [b]ID [c]TOPL [a]AE & TEST AGE	DIFFERENCE NORMAL [c]TOPL [a]AE & TEST AGE	DIFFERENCE AGE [c]TOPL TEST TIME	DIFFERENCE [d]TOAL-3 TEST TIME
1	172	168	168	8	8	F	10	33	85	-6	4	4
2	172	168	168	8	8	F	10	33	85	-6	4	4
3	172	168	168	8	8	F	10	33	85	-6	4	4
4	172	168	168	8	8	F	10	33	85	-6	4	4
5	172	168	168	8	8	F	10	33	85	-6	4	4
6	172	168	168	8	8	F	10	33	85	-6	4	4
7	172	168	168	8	8	F	10	33	85	-6	4	4
8	172	168	168	8	8	F	10	33	85	-6	4	4
9	172	168	168	8	8	F	10	33	85	-6	4	4
10	172	168	168	8	8	F	10	33	85	-6	4	4
11	189	167	169	8	8	F	-1	46	27	17	22	20
12	189	167	169	8	8	F	-1	46	27	17	22	20
13	189	167	169	8	8	F	-1	46	27	17	22	20
14	189	167	169	8	8	F	-1	46	27	17	22	20
15	189	167	169	8	8	F	-1	46	27	17	22	20
16	189	167	169	8	8	F	-1	46	27	17	22	20
17	181	171	172	9	9	F	10	68	93	-3	9	9
18	181	171	172	9	9	F	10	68	93	-3	9	9
19	181	171	172	9	9	F	10	68	93	-3	9	9
20	181	171	172	9	9	F	10	68	93	-3	9	9
21	181	171	172	9	9	F	10	68	93	-3	9	9
22	181	171	172	9	9	F	10	68	93	-3	9	9
23	181	171	172	9	9	F	10	68	93	-3	9	9
24	181	171	172	9	9	F	10	68	93	-3	9	9
25	181	171	172	9	9	F	10	68	93	-3	9	9
26	181	171	172	9	9	F	10	68	93	-3	9	9
27	181	171	172	9	9	F	10	68	93	-3	9	9
28	181	171	172	9	9	F	10	68	93	-3	9	9
29	181	171	172	9	9	F	10	68	93	-3	9	9
30	171	167	169	8	8	M	3	41	65	29	3	2
31	171	167	169	8	8	M	3	41	65	29	3	2
32	171	167	169	8	8	M	3	41	65	29	3	2
33	171	167	169	8	8	M	3	41	65	29	3	2
34	171	167	169	8	8	M	3	41	65	29	3	2
35	171	167	169	8	8	M	3	41	65	29	3	2

[a]OBS	DYAD	EXCHANGE	INITIATOR	NUMBER OF TURNS	AFFECT NORMAL	AFFECT [b]ID	JUSTIFI-CATION [b]ID	JUSTIFI-CATION NORMAL	LAST TURN	SPEECH ACT	DISPUTE TOPIC
36	4	7	Disabled	2	Absent	Absent	Present	Present	Normal	Statement Fact	Lesson Content
37	4	8	Normal	3	Absent	Present	Absent	Present	Normal	Statement Intent	Lesson Content
38	4	9	Normal	1	Present	Absent	Absent	Absent	Normal	Request / Action	Lesson Content
39	4	10	Normal	2	Absent	Absent	Absent	Absent	Disabled	Statement Fact	Assistance
40	5	1	Normal	1	Absent	Absent	Absent	Present	Normal	Statement Intent	Lesson Content
41	6	1	Normal	1	Absent	Absent	Absent	Absent	Normal	Request/Action	Lesson Content
42	6	2	Normal	1	Absent	Absent	Absent	Absent	Normal	Request/Action	Lesson Content
43	6	3	Disabled	6	Absent	Absent	Absent	Absent	Normal	Request/Action	Lesson Content
44	6	4	Disabled	1	Absent	Absent	Absent	Absent	Disabled	Request/Action	Lesson Content
45	6	5	Normal	3	Absent	Absent	Absent	Absent	Normal	Request/Action	Lesson Content
46	6	6	Normal	2	Absent	Absent	Present	Absent	Disabled	Request/Action	Lesson Content
47	7	1	Normal	3	Present	Absent	Absent	Absent	Normal	Statement Fact	Lesson Content
48	7	2	Normal	1	Present	Absent	Absent	Present	Normal	Statement Fact	Lesson Content
49	8	1	Normal	1	Absent	Absent	Absent	Absent	Normal	Statement Intent	Lesson Content
50	8	2	Disabled	1	Absent	Absent	Absent	Absent	Disabled	Request/Action	Lesson Content
51	8	3	Disabled	3	Absent	Absent	Absent	Absent	Disabled	Request/Action	Lesson Content
52	8	4	Normal	3	Absent	Absent	Absent	Present	Normal	Request/Action	Lesson Content
53	8	5	Disabled	2	Absent	Absent	Present	Present	Normal	Statement Fact	Lesson Content
54	8	6	Normal	1	Absent	Absent	Absent	Present	Normal	Request/Action	Lesson Content
55	8	7	Normal	2	Absent	Absent	Absent	Present	Disabled	Statement Fact	Lesson Content
56	8	8	Disabled	1	Absent	Absent	Present	Absent	Disabled	Request/Action	Assistance
57	8	9	Normal	1	Absent	Absent	Absent	Absent	Normal	Statement Intent	Lesson Content
58	8	10	Normal	4	Absent	Absent	Absent	Present	Disabled	Statement Intent	Lesson Content
59	8	11	Disabled	3	Present	Present	Present	Absent	Disabled	Request/Action	Assistance
60	8	12	Normal	2	Absent	Absent	Absent	Absent	Disabled	Request/Action	Lesson Content
61	8	13	Normal	1	Absent	Absent	Absent	Present	Normal	Statement Intent	Lesson Process
62	8	14	Normal	2	Absent	Absent	Present	Absent	Disabled	Request/Action	Lesson Content
63	8	15	Normal	6	Present	Present	Present	Absent	Disabled	Request/Action	Lesson Content
64	8	16	Normal	2	Absent	Absent	Absent	Absent	Disabled	Statement Fact	Lesson Process
65	9	1	Normal	1	Absent	Absent	Absent	Absent	Normal	Statement Fact	Lesson Process
66	9	2	Disabled	2	Absent	Absent	Absent	Absent	Normal	Request/Action	Assistance
67	9	3	Disabled	1	Absent	Absent	Absent	Absent	Normal	Request/Action	Lesson Content
68	10	1	Normal	1	Absent	Absent	Absent	Absent	Normal	Request/Action	Lesson Content
69	10	2	Disabled	2	Present	Absent	Absent	Absent	Normal	Request/Action	Lesson Content
70	10	3	Disabled	1	Absent	Present	Absent	Absent	Disabled	Reques /Action	Lesson Content

[a]OBS	DISPUTE OUTCOME	INITIAL OPPOSE	EXPLICIT NEGATIVE	[b]ID [c]TOPL RAW	[b]ID [c]TOPL [j]%ILE	[b]ID [c]TOPL QUOTIENT	[b]ID [c]TOPL [a]AE (mos.)	[b]ID [d]TOAL-3 TOTAL QUOTIENT	[b]ID [d]TOAL-3 LISTENING QUOTIENT	[b]ID [d]TOAL-3 SPEAKING QUOTIENT	[b]ID [d]TOAL-3 READING QUOTIENT
36	Disabled Submits	Justification	Absent	34	.	.	105	64	79	70	70
37	Standoff	Simple No	Present	34	.	.	105	64	79	70	70
38	Disabled Submits	Alternative	Absent	34	.	.	105	64	79	70	70
39	Standoff	Alternative	Absent	34	.	.	105	64	79	70	70
40	Disabled Submits	Quest/Challenge	Absent	23	.	.	66	41	52	49	52
41	Disabled Submits	Alternative	Absent	32	.	.	93	53	61	58	61
42	Standoff	Indirect No	Absent	32	.	.	93	53	61	58	61
43	Disabled Submits	Quest/Challenge	Absent	32	.	.	93	53	61	58	61
44	Standoff	Simple No	Present	32	.	.	93	53	61	58	61
45	Disabled Submits	Quest/Challenge	Absent	32	.	.	93	53	61	58	61
46	Normal Submits	Quest/Challenge	Absent	32	.	.	93	53	61	58	61
47	Standoff	Simple No	Present	35	25	90	114	67	94	70	64
48	Standoff	Justification	Absent	35	25	90	114	67	94	70	64
49	Disabled Submits	Alternative	Absent	34	21	88	105	62	88	76	58
50	Normal Submits	Alternative	Absent	34	21	88	105	62	88	76	58
51	Normal Submits	Quest/Challenge	Absent	34	21	88	105	62	88	76	58
52	Disabled Submits	Delay/Distract	Absent	34	21	88	105	62	88	76	58
53	Normal Submits	Justification	Absent	34	21	88	105	62	88	76	58
54	Disabled Submits	Alternative	Absent	34	21	88	105	62	88	76	58
55	Normal Submits	Alternative	Absent	34	21	88	105	62	88	76	58
56	Normal Submits	Quest/Challenge	Absent	34	21	88	105	62	88	76	58
57	Standoff	Alternative	Absent	34	21	88	105	62	88	76	58
58	Normal Submits	Alternative	Absent	34	21	88	105	62	88	76	58
59	Standoff	Alternative	Absent	34	21	88	105	62	88	76	58
60	Normal Submits	Delay/Distract	Absent	34	21	88	105	62	88	76	58
61	Disabled Submits	Justification	Absent	34	21	88	105	62	88	76	58
62	Normal Submits	Alternative	Absent	34	21	88	105	62	88	76	58
63	Normal Submits	Quest/Challenge	Absent	34	21	88	105	62	88	76	58
64	Normal Submits	Quest/Challenge	Absent	34	21	88	105	62	88	76	58
65	Disabled Submits	Justification	Absent	31	.	.	90	67	73	79	64
66	Standoff	Delay/Distract	Absent	31	.	.	90	67	73	79	64
67	Disabled Submits	Indirect No	Absent	31	.	.	90	67	73	79	64
68	Disabled Submits	Alternative	Absent	38	.	.	150	62	73	70	64
69	Disabled Submits	Delay/Distract	Absent	38	.	.	150	62	73	70	64
70	Normal Submits	Alternative	Absent	38	.	.	150	62	73	70	64

[a]OBS	[b]ID [d]TOAL-3 WRITING QUOTIENT	[b]ID [d]TOAL-3 SPOKEN [f]LANG. QUOTIENT	[b]ID [d]TOAL-3 WRITTEN [f]LANG. QUOTIENT	[b]ID [d]TOAL-3 [f]VOCAB. QUOTIENT	[b]ID [d]TOAL-3 GRAMMAR QUOTIENT	[b]ID [d]TOAL-3 [g]REC. [f]LANG. QUOTIENT	[b]ID [d]TOAL-3 [g]EXP. [f]LANG. QUOTIENT	NORMAL [c]TOPL RAW	NORMAL [c]TOPL [h]%ILE	NORMAL [c]TOPL QUOTIENT	NORMAL [c]TOPL [e]AE (mos.)
36	58	72	60	67	65	72	60	37	40	96	138
37	58	72	60	67	65	72	60	37	40	96	138
38	58	72	60	67	65	72	60	37	40	96	138
39	58	72	60	67	65	72	60	37	40	96	138
40	46	45	43	43	45	47	42	41	69	107	186
41	58	55	55	53	57	57	53	36	33	93	126
42	58	55	55	53	57	57	53	36	33	93	126
43	58	55	55	53	57	57	53	36	33	93	126
44	58	55	55	53	57	57	53	36	33	93	126
45	58	55	55	53	57	57	53	36	33	93	126
46	58	55	55	53	57	57	53	36	33	93	126
47	58	80	57	72	65	77	60	37	46	98	138
48	58	80	57	72	65	77	60	37	46	98	138
49	49	80	48	67	62	70	58	44	91	120	186
50	49	80	48	67	62	70	58	44	91	120	186
51	49	80	48	67	62	70	58	44	91	120	186
52	49	80	48	67	62	70	58	44	91	120	186
53	49	80	48	67	62	70	58	44	91	120	186
54	49	80	48	67	62	70	58	44	91	120	186
55	49	80	48	67	62	70	58	44	91	120	186
56	49	80	48	67	62	70	58	44	91	120	186
57	49	80	48	67	62	70	58	44	91	120	186
58	49	80	48	67	62	70	58	44	91	120	186
59	49	80	48	67	62	70	58	44	91	120	186
60	49	80	48	67	62	70	58	44	91	120	186
61	49	80	48	67	62	70	58	44	91	120	186
62	49	80	48	67	62	70	58	44	91	120	186
63	49	80	48	67	62	70	58	44	91	120	186
64	49	80	48	67	62	70	58	44	91	120	186
65	70	73	63	78	58	65	72	38	50	98	150
66	70	73	63	78	58	65	72	38	50	98	150
67	70	73	63	78	58	65	72	38	50	98	150
68	61	68	58	63	63	65	62	42	69	107	186
69	61	68	58	63	63	65	62	42	69	107	186
70	61	68	58	63	63	65	62	42	69	107	186

OBS	NORMAL TOAL-3 TOTAL QUOTIENT	NORMAL TOAL-3 LISTENING QUOTIENT	NORMAL TOAL-3 SPEAKING QUOTIENT	NORMAL TOAL-3 READING QUOTIENT	NORMAL TOAL-3 WRITING QUOTIENT	NORMAL TOAL-3 SPOKEN LANG. QUOTIENT	NORMAL TOAL-3 WRITTEN LANG. QUOTIENT	NORMAL TOAL-3 VOCAB. QUOTIENT	NORMAL TOAL-3 GRAMMAR QUOTIENT	NORMAL TOAL-3 REC. LANG. QUOTIENT	NORMAL TOAL-3 EXP. LANG. QUOTIENT	ID TOPI, AGE (mos.)
36	105	100	94	106	118	97	113	105	105	103	107	170
37	105	100	94	106	118	97	113	105	105	103	107	170
38	105	100	94	106	118	97	113	105	105	103	107	170
39	105	100	94	106	118	97	113	105	105	103	107	170
40	103	121	97	100	94	110	97	117	90	112	95	177
41	97	94	85	103	109	88	107	100	95	98	97	183
42	97	94	85	103	109	88	107	100	95	98	97	183
43	97	94	85	103	109	88	107	100	95	98	97	183
44	97	94	85	103	109	88	107	100	95	98	97	183
45	97	94	85	103	109	88	107	100	95	98	97	183
46	97	94	85	103	109	88	107	100	95	98	97	183
47	92	103	97	79	94	100	85	93	92	90	95	165
48	92	103	97	79	94	100	85	93	92	90	95	165
49	99	103	109	85	100	107	92	123	75	93	105	155
50	99	103	109	85	100	107	92	123	75	93	105	155
51	99	103	109	85	100	107	92	123	75	93	105	155
52	99	103	109	85	100	107	92	123	75	93	105	155
53	99	103	109	85	100	107	92	123	75	93	105	155
54	99	103	109	85	100	107	92	123	75	93	105	155
55	99	103	109	85	100	107	92	123	75	93	105	155
56	99	103	109	85	100	107	92	123	75	93	105	155
57	99	103	109	85	100	107	92	123	75	93	105	155
58	99	103	109	85	100	107	92	123	75	93	105	155
59	99	103	109	85	100	107	92	123	75	93	105	155
60	99	103	109	85	100	107	92	123	75	93	105	155
61	99	103	109	85	100	107	92	123	75	93	105	155
62	99	103	109	85	100	107	92	123	75	93	105	155
63	99	103	109	85	100	107	92	123	75	93	105	155
64	99	103	109	85	100	107	92	123	75	93	105	155
65	79	82	91	82	73	85	75	85	75	80	80	177
66	79	82	91	82	73	85	75	85	75	80	80	177
67	79	82	91	82	73	85	75	85	75	80	80	177
68	94	103	97	91	88	100	88	98	90	97	92	181
69	94	103	97	91	88	100	88	98	90	97	92	181
70	94	103	97	91	88	100	88	98	90	97	92	181

[a]OBS	[b]ID [d]TOAL-3 AGE (mos.)	NORMAL [c]TOPL AGE (mos.)	NORMAL [d]TOAL-3 AGE (mos.)	[b]ID GRADE	NORMAL GRADE	SEX	DIFFERENCE SCORE [c]TOPL RAW	DIFFERENCE [d]TOAL-3 QUOTIENT	DIFFERENCE [b]ID [c]TOPL [a]AE & TEST AGE	DIFFERENCE NORMAL [c]TOPL [a]AE & TEST AGE	DIFFERENCE AGE [c]TOPL TEST TIME	DIFFERENCE [d]TOAL-3 TEST TIME
36	171	167	169	8	8	M	3	41	65	29	3	2
37	171	167	169	8	8	M	3	41	65	29	3	2
38	171	167	169	8	8	M	3	41	65	29	3	2
39	171	167	169	8	8	M	3	41	65	29	3	2
40	177	150	150	8	7	F	18	62	111	-36	27	27
41	183	160	162	8	8	M	4	44	90	34	23	21
42	183	160	162	8	8	M	4	44	90	34	23	21
43	183	160	162	8	8	M	4	44	90	34	23	21
44	183	160	162	8	8	M	4	44	90	34	23	21
45	183	160	162	8	8	M	4	44	90	34	23	21
46	183	160	162	8	8	M	4	44	90	34	23	21
47	167	147	149	7	7	M	2	25	51	9	18	18
48	167	147	149	7	7	M	2	25	51	9	18	18
49	155	145	145	7	7	M	10	37	50	-41	10	10
50	155	145	145	7	7	M	10	37	50	-41	10	10
51	155	145	145	7	7	M	10	37	50	-41	10	10
52	155	145	145	7	7	M	10	37	50	-41	10	10
53	155	145	145	7	7	M	10	37	50	-41	10	10
54	155	145	145	7	7	M	10	37	50	-41	10	10
55	155	145	145	7	7	M	10	37	50	-41	10	10
56	155	145	145	7	7	M	10	37	50	-41	10	10
57	155	145	145	7	7	M	10	37	50	-41	10	10
58	155	145	145	7	7	M	10	37	50	-41	10	10
59	155	145	145	7	7	M	10	37	50	-41	10	10
60	155	145	145	7	7	M	10	37	50	-41	10	10
61	155	145	145	7	7	M	10	37	50	-41	10	10
62	155	145	145	7	7	M	10	37	50	-41	10	10
63	155	145	145	7	7	M	10	37	50	-41	10	10
64	155	145	145	7	7	M	10	37	50	-41	10	10
65	178	164	164	8	8	M	7	12	87	14	13	14
66	178	164	164	8	8	M	7	12	87	14	13	14
67	178	164	164	8	8	M	7	12	87	14	13	14
68	183	165	166	8	8	F	4	32	31	-21	16	17
69	183	165	166	8	8	F	4	32	31	-21	16	17
70	183	165	166	8	8	F	4	32	31	-21	16	17

[a]OBS	DYAD	EXCHANGE	INITIATOR	NUMBER OF TURNS	AFFECT NORMAL	AFFECT [b]ID	JUSTIFI-CATION [b]ID	JUSTIFI-CATION NORMAL	LAST TURN	SPEECH ACT	DISPUTE TOPIC
71	10	4	Normal	2	Absent	Absent	Absent	Present	Disabled	Statement Fact	Lesson Content
72	10	5	Normal	3	Absent	Absent	Absent	Present	Normal	Request/Action	Lesson Content
73	10	6	Normal	3	Absent	Absent	Present	Absent	Normal	Statement Fact	Lesson Content
74	10	7	Normal	2	Absent	Absent	Absent	Absent	Disabled	Statement Fact	Lesson Content
75	10	8	Normal	1	Absent	Absent	Absent	Absent	Normal	Statement Intent	Lesson Content
76	10	9	Normal	3	Absent	Absent	Absent	Present	Normal	Request/Action	Lesson Content
77	10	10	Normal	2	Absent	Absent	Present	Absent	Disabled	Statement Intent	Lesson Content
78	10	11	Normal	15	Present	Present	Present	Present	Normal	Statement Intent	Lesson Content
79	10	12	Disabled	9	Absent	Present	Present	Present	Disabled	Statement Intent	Lesson Content
80	10	13	Normal	1	Absent	Absent	Absent	Absent	Normal	Statement Fact	Lesson Content
81	10	14	Normal	2	Absent	Absent	Present	Present	Disabled	Request/Action	Lesson Content
82	11	1	Normal	2	Absent	Absent	Absent	Present	Normal	Statement Intent	Lesson Content
83	11	2	Disabled	1	Absent	Absent	Absent	Absent	Disabled	Request/Action	Assistance
84	11	3	Normal	2	Absent	Absent	Absent	Present	Disabled	Request/Action	Lesson Content
85	11	4	Normal	2	Absent	Absent	Absent	Absent	Disabled	Request/Action	Lesson Content
86	11	5	Disabled	1	Absent	Absent	Absent	Absent	Disabled	Statement Fact	Lesson Content
87	11	6	Normal	1	Absent	Absent	Absent	Present	Normal	Statement Fact	Lesson Content
88	11	7	Normal	1	Absent	Absent	Absent	Present	Normal	Statement Fact	Lesson Content
89	11	8	Disabled	1	Absent	Absent	Present	Absent	Disabled	Statement Fact	Lesson Content
90	11	9	Normal	1	Absent	Absent	Absent	Present	Normal	Statement Intent	Lesson Content
91	11	10	Normal	6	Absent	Absent	Absent	Present	Disabled	Request/Action	Lesson Content
92	11	11	Normal	3	Absent	Absent	Present	Present	Normal	Statement Intent	Lesson Content
93	11	12	Normal	1	Absent	Absent	Absent	Present	Normal	Request/Action	Lesson Content
94	11	13	Normal	2	Absent	Absent	Absent	Present	Disabled	Request/Action	Lesson Content
95	12	1	Normal	1	Absent	Absent	Absent	Present	Normal	Request/Action	Lesson Content
96	12	2	Disabled	1	Absent	Absent	Absent	Absent	Disabled	Request/Action	Lesson Process
97	12	3	Normal	2	Absent	Absent	Absent	Absent	Disabled	Request/Action	Lesson Content
98	12	4	Normal	1	Absent	Absent	Absent	Present	Normal	Request/Action	Lesson Content
99	12	5	Disabled	1	Absent	Present	Present	Absent	Disabled	Request/Action	Lesson Process
100	12	6	Disabled	1	Absent	Absent	Absent	Absent	Disabled	Statement Fact	Lesson Content
101	12	7	Disabled	1	Absent	Absent	Absent	Absent	Disabled	Statement Intent	Lesson Process
102	12	8	Normal	2	Absent	Absent	Present	Present	Disabled	Statement Intent	Lesson Content
103	12	9	Normal	1	Absent	Absent	Absent	Present	Normal	Statement Fact	Other
104	12	10	Normal	6	Absent	Absent	Present	Absent	Disabled	Request/Action	Lesson Content

OBS	DISPUTE OUTCOME	INITIAL OPPOSE	EXPLICIT NEGATIVE	ID TOPL RAW	ID TOPL %ILE	ID TOPL QUOTIENT	ID TOPL AE (mos.)	ID TOAL-3 TOTAL QUOTIENT	ID TOAL-3 LISTENING QUOTIENT	ID TOAL-3 SPEAKING QUOTIENT	ID TOAL-3 READING QUOTIENT
71	Disabled Submits	Justification	Absent	38	.	.	150	62	73	70	64
72	Disabled Submits	Indirect No	Absent	38	.	.	150	62	73	70	64
73	Disabled Submits	Quest/Challenge	Absent	38	.	.	150	62	73	70	64
74	Standoff	Quest/Challenge	Absent	38	.	.	150	62	73	70	64
75	Standoff	Alternative	Absent	38	.	.	150	62	73	70	64
76	Disabled Submits	Alternative	Absent	38	.	.	150	62	73	70	64
77	Normal Submits	Indirect No	Absent	38	.	.	150	62	73	70	64
78	Disabled Submits	Quest/Challenge	Absent	38	.	.	150	62	73	70	64
79	Normal Submits	Justification	Absent	38	.	.	150	62	73	70	64
80	Disabled Submits	Indirect No	Absent	38	.	.	150	62	73	70	64
81	Normal Submits	Justification	Absent	38	.	.	150	62	73	70	64
82	Normal Submits	Justification	Absent	34	21	88	105	49	55	64	55
83	Normal Submits	Alternative	Present	34	21	88	105	49	55	64	55
84	Normal Submits	Justification	Absent	34	21	88	105	49	55	64	55
85	Compromise	Alternative	Absent	34	21	88	105	49	55	64	55
86	Standoff	Simple No	Absent	34	21	88	105	49	55	64	55
87	Disabled Submits	Justification	Absent	34	21	88	105	49	55	64	55
88	Disabled Submits	Quest/Challenge	Absent	34	21	88	105	49	55	64	55
89	Normal Submits	Justification	Absent	34	21	88	105	49	55	64	55
90	Disabled Submits	Justification	Absent	34	21	88	105	49	55	64	55
91	Compromise	Quest/Challenge	Absent	34	21	88	105	49	55	64	55
92	Disabled Submits	Quest/Challenge	Absent	34	21	88	105	49	55	64	55
93	Disabled Submits	Justification	Present	34	21	88	105	49	55	64	55
94	Disabled Submits	Alternative	Absent	34	21	88	105	49	55	64	55
95	Disabled Submits	Alternative	Absent	32	.	.	93	75	94	100	67
96	Normal Submits	Simple No	Absent	32	.	.	93	75	94	100	67
97	Compromise	Simple No	Present	32	.	.	93	75	94	100	67
98	Standoff	Alternative	Absent	32	.	.	93	75	94	100	67
99	Normal Submits	Justification	Absent	32	.	.	93	75	94	100	67
100	Normal Submits	Indirect No	Absent	32	.	.	93	75	94	100	67
101	Normal Submits	Simple No	Present	32	.	.	93	75	94	100	67
102	Normal Submits	Justification	Absent	32	.	.	93	75	94	100	67
103	Disabled Submits	Justification	Absent	32	.	.	93	75	94	100	67
104	Normal Submits	Alternative	Absent	32	.	.	93	75	94	100	67

OBS	ID TOAL-3 WRITING QUOTIENT	ID TOAL-3 SPOKEN LANG. QUOTIENT	ID TOAL-3 WRITTEN LANG. QUOTIENT	ID TOAL-3 VOCAB. QUOTIENT	ID TOAL-3 GRAMMAR QUOTIENT	ID TOAL-3 REC. LANG. QUOTIENT	ID TOAL-3 EXP. LANG. QUOTIENT	NORMAL TOPL RAW	NORMAL TOPL %ILE	NORMAL TOPL QUOTIENT	NORMAL TOPL AE (mos.)
71	61	68	58	63	63	65	62	42	69	107	186
72	61	68	58	63	63	65	62	42	69	107	186
73	61	68	58	63	63	65	62	42	69	107	186
74	61	68	58	63	63	65	62	42	69	107	186
75	61	68	58	63	63	65	62	42	69	107	186
76	61	68	58	63	63	65	62	42	69	107	186
77	61	68	58	63	63	65	62	42	69	107	186
78	61	68	58	63	63	65	62	42	69	107	186
79	61	68	58	63	63	65	62	42	69	107	186
80	61	68	58	63	63	65	62	42	69	107	186
81	61	68	58	63	63	65	62	42	69	107	186
82	52	55	48	52	52	50	53	41	69	107	186
83	52	55	48	52	52	50	53	41	69	107	186
84	52	55	48	52	52	50	53	41	69	107	186
85	52	55	48	52	52	50	53	41	69	107	186
86	52	55	48	52	52	50	53	41	69	107	186
87	52	55	48	52	52	50	53	41	69	107	186
88	52	55	48	52	52	50	53	41	69	107	186
89	52	55	48	52	52	50	53	41	69	107	186
90	52	55	48	52	52	50	53	41	69	107	186
91	52	55	48	52	52	50	53	41	69	107	186
92	52	55	48	52	52	50	53	41	69	107	186
93	52	55	48	52	52	50	53	41	69	107	186
94	52	55	48	52	52	50	53	41	69	107	186
95	52	97	55	83	68	78	73	42	69	107	186
96	52	97	55	83	68	78	73	42	69	107	186
97	52	97	55	83	68	78	73	42	69	107	186
98	52	97	55	83	68	78	73	42	69	107	186
99	52	97	55	83	68	78	73	42	69	107	186
100	52	97	55	83	68	78	73	42	69	107	186
101	52	97	55	83	68	78	73	42	69	107	186
102	52	97	55	83	68	78	73	42	69	107	186
103	52	97	55	83	68	78	73	42	69	107	186
104	52	97	55	83	68	78	73	42	69	107	186

[a]OBS	NORMAL [d]TOAL-3 TOTAL QUOTIENT	NORMAL [d]TOAL-3 LISTENING QUOTIENT	NORMAL [d]TOAL-3 SPEAKING QUOTIENT	NORMAL [d]TOAL-3 READING QUOTIENT	NORMAL [d]TOAL-3 WRITING QUOTIENT	NORMAL [d]TOAL-3 SPOKEN [f]LANG. QUOTIENT	NORMAL [d]TOAL-3 WRITTEN [f]LANG. QUOTIENT	NORMAL [d]TOAL-3 [f]VOCAB. QUOTIENT	NORMAL [d]TOAL-3 GRAMMAR QUOTIENT	NORMAL [d]TOAL-3 [g]REC. [f]LANG. QUOTIENT	NORMAL [d]TOAL-3 [h]EXP. [f]LANG. QUOTIENT	[b]ID [c]TOPL AGE (mos.)
71	94	103	97	91	88	100	88	98	90	97	92	181
72	94	103	97	91	88	100	88	98	90	97	92	181
73	94	103	97	91	88	100	88	98	90	97	92	181
74	94	103	97	91	88	100	88	98	90	97	92	181
75	94	103	97	91	88	100	88	98	90	97	92	181
76	94	103	97	91	88	100	88	98	90	97	92	181
77	94	103	97	91	88	100	88	98	90	97	92	181
78	94	103	97	91	88	100	88	98	90	97	92	181
79	94	103	97	91	88	100	88	98	90	97	92	181
80	94	103	97	91	88	100	88	98	90	97	92	181
81	94	103	97	91	88	100	88	98	90	97	92	181
82	89	100	91	70	100	95	83	100	78	83	95	150
83	89	100	91	70	100	95	83	100	78	83	95	150
84	89	100	91	70	100	95	83	100	78	83	95	150
85	89	100	91	70	100	95	83	100	78	83	95	150
86	89	100	91	70	100	95	83	100	78	83	95	150
87	89	100	91	70	100	95	83	100	78	83	95	150
88	89	100	91	70	100	95	83	100	78	83	95	150
89	89	100	91	70	100	95	83	100	78	83	95	150
90	89	100	91	70	100	95	83	100	78	83	95	150
91	89	100	91	70	100	95	83	100	78	83	95	150
92	89	100	91	70	100	95	83	100	78	83	95	150
93	89	100	91	70	100	95	83	100	78	83	95	150
94	89	100	91	70	100	95	83	100	78	83	95	150
95	113	112	103	121	109	108	117	117	108	118	107	169
96	113	112	103	121	109	108	117	117	108	118	107	169
97	113	112	103	121	109	108	117	117	108	118	107	169
98	113	112	103	121	109	108	117	117	108	118	107	169
99	113	112	103	121	109	108	117	117	108	118	107	169
100	113	112	103	121	109	108	117	117	108	118	107	169
101	113	112	103	121	109	108	117	117	108	118	107	169
102	113	112	103	121	109	108	117	117	108	118	107	169
103	113	112	103	121	109	108	117	117	108	118	107	169
104	113	112	103	121	109	108	117	117	108	118	107	169

[a]OBS	[b]ID [d]TOAL-3 AGE (mos.)	NORMAL [c]TOPL AGE (mos.)	NORMAL [d]TOAL-3 AGE (mos.)	[b]ID GRADE	NORMAL GRADE	SEX	DIFFERENCE SCORE [c]TOPL RAW	DIFFERENCE [d]TOAL-3 QUOTIENT	DIFFERENCE [b]ID [c]TOPL [a]AE & TEST AGE	DIFFERENCE NORMAL [c]TOPL [a]AE & TEST AGE	DIFFERENCE AGE [c]TOPL TEST TIME	DIFFERENCE [d]TOAL-3 TEST TIME
71	183	165	166	8	8	F	4	32	31	-21	16	17
72	183	165	166	8	8	F	4	32	31	-21	16	17
73	183	165	166	8	8	F	4	32	31	-21	16	17
74	183	165	166	8	8	F	4	32	31	-21	16	17
75	183	165	166	8	8	F	4	32	31	-21	16	17
76	183	165	166	8	8	F	4	32	31	-21	16	17
77	183	165	166	8	8	F	4	32	31	-21	16	17
78	183	165	166	8	8	F	4	32	31	-21	16	17
79	183	165	166	8	8	F	4	32	31	-21	16	17
80	183	165	166	8	8	F	4	32	31	-21	16	17
81	183	165	166	8	8	F	4	32	31	-21	16	17
82	150	145	146	7	7	M	7	40	45	-41	5	4
83	150	145	146	7	7	M	7	40	45	-41	5	4
84	150	145	146	7	7	M	7	40	45	-41	5	4
85	150	145	146	7	7	M	7	40	45	-41	5	4
86	150	145	146	7	7	M	7	40	45	-41	5	4
87	150	145	146	7	7	M	7	40	45	-41	5	4
88	150	145	146	7	7	M	7	40	45	-41	5	4
89	150	145	146	7	7	M	7	40	45	-41	5	4
90	150	145	146	7	7	M	7	40	45	-41	5	4
91	150	145	146	7	7	M	7	40	45	-41	5	4
92	150	145	146	7	7	M	7	40	45	-41	5	4
93	150	145	146	7	7	M	7	40	45	-41	5	4
94	150	145	146	7	7	M	7	40	45	-41	5	4
95	169	160	161	8	8	M	10	38	76	-26	9	8
96	169	160	161	8	8	M	10	38	76	-26	9	8
97	169	160	161	8	8	M	10	38	76	-26	9	8
98	169	160	161	8	8	M	10	38	76	-26	9	8
99	169	160	161	8	8	M	10	38	76	-26	9	8
100	169	160	161	8	8	M	10	38	76	-26	9	8
101	169	160	161	8	8	M	10	38	76	-26	9	8
102	169	160	161	8	8	M	10	38	76	-26	9	8
103	169	160	161	8	8	M	10	38	76	-26	9	8
104	169	160	161	8	8	M	10	38	76	-26	9	8

[a]OBS	DYAD	EXCHANGE	INITIATOR	NUMBER OF TURNS	AFFECT NORMAL	AFFECT [b]ID	JUSTIFI-CATION [b]ID	JUSTIFI-CATION NORMAL	LAST TURN	SPEECH ACT	DISPUTE TOPIC
105	12	11	Disabled	1	Absent	Absent	Present	Absent	Disabled	Statement Fact	Lesson Content
106	12	12	Disabled	1	Absent	Absent	Absent	Absent	Disabled	Statement Fact	Lesson Content
107	12	13	Normal	1	Absent	Absent	Absent	Present	Normal	Request/Action	Lesson Content
108	12	14	Disabled	4	Absent	Absent	Absent	Present	Normal	Request/Action	Lesson Content
109	12	15	Disabled	2	Present	Present	Present	Present	Normal	Request/Action	Lesson Content
110	13	1	Normal	1	Absent	Absent	Absent	Absent	Normal	Request/Action	Lesson Content
111	13	2	Disabled	1	Absent	Absent	Absent	Absent	Disabled	Statement Intent	Lesson Content
112	13	3	Normal	1	Absent	Absent	Absent	Absent	Normal	Request/Action	Lesson Content
113	13	4	Normal	1	Absent	Absent	Absent	Absent	Normal	Request/Action	Lesson Content
114	14	1	Normal	3	Absent	Absent	Absent	Present	Normal	Request/Action	Lesson Content
115	14	2	Disabled	1	Absent	Absent	Present	Absent	Disabled	Request/Action	Lesson Process
116	14	3	Disabled	2	Absent	Absent	Absent	Absent	Normal	Request/Action	Lesson Content
117	14	4	Disabled	1	Absent	Absent	Present	Absent	Disabled	Request/Action	Lesson Content
118	14	5	Disabled	2	Absent	Absent	Absent	Present	Normal	Request/Action	Lesson Process
119	14	6	Normal	1	Absent	Absent	Absent	Absent	Normal	Request/Action	Lesson Content
120	14	7	Disabled	1	Absent	Absent	Present	Absent	Disabled	Request/Action	Lesson Content
121	14	8	Normal	3	Absent	Present	Absent	Present	Normal	Statement Fact	Lesson Process
122	14	9	Normal	2	Absent	Absent	Absent	Absent	Disabled	Request/Action	Lesson Content
123	14	10	Normal	4	Present	Present	Present	Present	Disabled	Request/Action	Lesson Content
124	14	11	Normal	2	Absent	Present	Present	Present	Disabled	Request/Action	Lesson Content
125	14	12	Normal	2	Absent	Present	Absent	Present	Disabled	Request/Action	Lesson Process
126	14	13	Normal	10	Present	Present	Present	Present	Disabled	Request/Action	Lesson Content
127	15	1	Disabled	2	Absent	Absent	Absent	Absent	Normal	Request/Action	Lesson Content
128	15	2	Disabled	1	Absent	Absent	Absent	Absent	Disabled	Request/Action	Lesson Process
129	15	3	Normal	1	Absent	Absent	Absent	Absent	Normal	Statement Intent	Lesson Content
130	15	4	Disabled	1	Absent	Absent	Absent	Absent	Disabled	Request/Action	Lesson Content
131	15	5	Normal	1	Absent	Absent	Absent	Absent	Normal	Request/Action	Lesson Content
132	15	6	Disabled	1	Absent	Present	Present	Absent	Disabled	Request/Action	Lesson Content
133	15	7	Disabled	1	Absent	Absent	Absent	Absent	Normal	Statement Intent	Lesson Content
134	15	8	Normal	1	Absent	Absent	Absent	Present	Normal	Request/Action	Lesson Content
135	15	9	Normal	1	Absent	Absent	Absent	Present	Normal	Statement Fact	Lesson Process
136	15	10	Normal	1	Absent	Absent	Absent	Present	Normal	Request/Action	Lesson Content
137	15	11	Normal	6	Present	Present	Present	Present	Disabled	Statement Intent	Lesson Content
138	15	12	Disabled	2	Absent	Absent	Absent	Absent	Normal	Statement Intent	Lesson Content
139	15	13	Normal	1	Present	Absent	Present	Present	Normal	Request/Action	Lesson Content

[a]OBS	DISPUTE OUTCOME	INITIAL OPPOSE	EXPLICIT NEGATIVE	[b]ID [c]TOPL RAW	[b]ID [c]TOPL [d]%ILE	[b]ID [c]TOPL QUOTIENT	[b]ID [c]TOPL [e]AE (mos.)	[b]ID [d]TOAL-3 TOTAL QUOTIENT	[b]ID [d]TOAL-3 LISTENING QUOTIENT	[b]ID [d]TOAL-3 SPEAKING QUOTIENT	[b]ID [d]TOAL-3 READING QUOTIENT
105	Standoff	Justification	Absent	32	.	.	93	75	94	100	67
106	Disabled Submits	Delay/Distract	Absent	32	.	.	93	75	94	100	67
107	Disabled Submits	Alternative	Absent	32	.	.	93	75	94	100	67
108	Disabled Submits	Quest/Challenge	Absent	32	.	.	93	75	94	100	67
109	Disabled Submits	Justification	Absent	32	.	.	93	75	94	100	67
110	Disabled Submits	Alternative	Absent	30	6	77	87	48	58	49	58
111	Standoff	Indirect No.	Absent	30	6	77	87	48	58	49	58
112	Disabled Submits	Alternative	Absent	30	6	77	87	48	58	49	58
113	Disabled Submits	Alternative	Absent	30	6	77	87	48	58	49	58
114	Disabled Submits	Quest/Challenge	Absent	37	.	.	138	81	94	82	76
115	Normal Submits	Justification	Absent	37	.	.	138	81	94	82	76
116	Disabled Submits	Indirect No	Absent	37	.	.	138	81	94	82	76
117	Normal Submits	Alternative	Absent	37	.	.	138	81	94	82	76
118	Disabled Submits	Simple No	Present	37	.	.	138	81	94	82	76
119	Standoff	Indirect No	Absent	37	.	.	138	81	94	82	76
120	Normal Submits	Quest/Challenge	Absent	37	.	.	138	81	94	82	76
121	Standoff	Justification	Present	37	.	.	138	81	94	82	76
122	Disabled Submits	Alternative	Absent	37	.	.	138	81	94	82	76
123	Normal Submits	Quest/Challenge	Absent	37	.	.	138	81	94	82	76
124	Normal Submits	Quest/Challenge	Absent	37	.	.	138	81	94	82	76
125	Disabled Submits	Justification	Present	37	.	.	138	81	94	82	76
126	Compromise	Justification	Present	37	.	.	138	81	94	82	76
127	Disabled Submits	Alternative	Absent	33	14	84	99	63	76	70	61
128	Normal Submits	Indirect No	Absent	33	14	84	99	63	76	70	61
129	Normal Submits	Simple No	Present	33	14	84	99	63	76	70	61
130	Disabled Submits	Simple No	Present	33	14	84	99	63	76	70	61
131	Disabled Submits	Delay/Distract	Absent	33	14	84	99	63	76	70	61
132	Normal Submits	Justification	Absent	33	14	84	99	63	76	70	61
133	Normal Submits	Quest/Challenge	Absent	33	14	84	99	63	76	70	61
134	Disabled Submits	Alternative	Absent	33	14	84	99	63	76	70	61
135	Compromise	Alternative	Absent	33	14	84	99	63	76	70	61
136	Disabled Submits	Justification	Absent	33	14	84	99	63	76	70	61
137	Standoff	Alternative	Absent	33	14	84	99	63	76	70	61
138	Disabled Submits	Quest/Challenge	Absent	33	14	84	99	63	76	70	61
139	Disabled Submits	Indirect No	Absent	33	14	84	99	63	76	70	61

[a]OBS	[b]ID [d]TOAL-3 WRITING QUOTIENT	[b]ID [d]TOAL-3 SPOKEN [f]LANG. QUOTIENT	[b]ID [d]TOAL-3 WRITTEN [f]LANG. QUOTIENT	[b]ID [d]TOAL-3 [g]VOCAB. QUOTIENT	[b]ID [d]TOAL-3 GRAMMAR QUOTIENT	[b]ID [d]TOAL-3 [e]REC. [f]LANG. QUOTIENT	[b]ID [d]TOAL-3 [h]EXP. [f]LANG. QUOTIENT	NORMAL [c]TOPL RAW	NORMAL [c]TOPL [i]%ILE	NORMAL [c]TOPL QUOTIENT	NORMAL [c]TOPL [j]AE (mos.)
105	52	97	55	83	68	78	73	42	69	107	186
106	52	97	55	83	68	78	73	42	69	107	186
107	52	97	55	83	68	78	73	42	69	107	186
108	52	97	55	83	68	78	73	42	69	107	186
109	52	97	55	83	68	78	73	42	69	107	186
110	55	48	52	48	52	53	47	39	57	103	162
111	55	48	52	48	52	53	47	39	57	103	162
112	55	48	52	48	52	53	47	39	57	103	162
113	55	48	52	48	52	53	47	39	57	103	162
114	82	87	77	87	77	83	80	41	62	105	186
115	82	87	77	87	77	83	80	41	62	105	186
116	82	87	77	87	77	83	80	41	62	105	186
117	82	87	77	87	77	83	80	41	62	105	186
118	82	87	77	87	77	83	80	41	62	105	186
119	82	87	77	87	77	83	80	41	62	105	186
120	82	87	77	87	77	83	80	41	62	105	186
121	82	87	77	87	77	83	80	41	62	105	186
122	82	87	77	87	77	83	80	41	62	105	186
123	82	87	77	87	77	83	80	41	62	105	186
124	82	87	77	87	77	83	80	41	62	105	186
125	82	87	77	87	77	83	80	41	62	105	186
126	82	87	77	87	77	83	80	41	62	105	186
127	67	70	60	72	58	65	65	38	46	98	150
128	67	70	60	72	58	65	65	38	46	98	150
129	67	70	60	72	58	65	65	38	46	98	150
130	67	70	60	72	58	65	65	38	46	98	150
131	67	70	60	72	58	65	65	38	46	98	150
132	67	70	60	72	58	65	65	38	46	98	150
133	67	70	60	72	58	65	65	38	46	98	150
134	67	70	60	72	58	65	65	38	46	98	150
135	67	70	60	72	58	65	65	38	46	98	150
136	67	70	60	72	58	65	65	38	46	98	150
137	67	70	60	72	58	65	65	38	46	98	150
138	67	70	60	72	58	65	65	38	46	98	150
139	67	70	60	72	58	65	65	38	46	98	150

[a]OBS	NORMAL [c]TOAL-3 TOTAL QUOTIENT	NORMAL [c]TOAL-3 LISTENING QUOTIENT	NORMAL [c]TOAL-3 SPEAKING QUOTIENT	NORMAL [c]TOAL-3 READING QUOTIENT	NORMAL [c]TOAL-3 WRITING QUOTIENT	NORMAL [c]TOAL-3 SPOKEN [i]LANG. QUOTIENT	NORMAL [c]TOAL-3 WRITTEN [i]LANG. QUOTIENT	NORMAL [c]TOAL-3 [f]VOCAB. QUOTIENT	NORMAL [c]TOAL-3 GRAMMAR QUOTIENT	NORMAL [c]TOAL-3 [g]REC. [i]LANG. QUOTIENT	NORMAL [c]TOAL-3 [h]EXP. [i]LANG. QUOTIENT	[b]ID [c]TOPL AGE (mos.)
105	113	112	103	121	109	108	117	117	108	118	107	169
106	113	112	103	121	109	108	117	117	108	118	107	169
107	113	112	103	121	109	108	117	117	108	118	107	169
108	113	112	103	121	109	108	117	117	108	118	107	169
109	113	112	103	121	109	108	117	117	108	118	107	169
110	116	100	115	133	106	108	122	110	120	118	112	155
111	116	100	115	133	106	108	122	110	120	118	112	155
112	116	100	115	133	106	108	122	110	120	118	112	155
113	116	100	115	133	106	108	122	110	120	118	112	155
114	117	109	115	109	124	113	118	117	115	110	122	172
115	117	109	115	109	124	113	118	117	115	110	122	172
116	117	109	115	109	124	113	118	117	115	110	122	172
117	117	109	115	109	124	113	118	117	115	110	122	172
118	117	109	115	109	124	113	118	117	115	110	122	172
119	117	109	115	109	124	113	118	117	115	110	122	172
120	117	109	115	109	124	113	118	117	115	110	122	172
121	117	109	115	109	124	113	118	117	115	110	122	172
122	117	109	115	109	124	113	118	117	115	110	122	172
123	117	109	115	109	124	113	118	117	115	110	122	172
124	117	109	115	109	124	113	118	117	115	110	122	172
125	117	109	115	109	124	113	118	117	115	110	122	172
126	117	109	115	109	124	113	118	117	115	110	122	172
127	74	85	79	70	76	80	70	83	67	75	75	164
128	74	85	79	70	76	80	70	83	67	75	75	164
129	74	85	79	70	76	80	70	83	67	75	75	164
130	74	85	79	70	76	80	70	83	67	75	75	164
131	74	85	79	70	76	80	70	83	67	75	75	164
132	74	85	79	70	76	80	70	83	67	75	75	164
133	74	85	79	70	76	80	70	83	67	75	75	164
134	74	85	79	70	76	80	70	83	67	75	75	164
135	74	85	79	70	76	80	70	83	67	75	75	164
136	74	85	79	70	76	80	70	83	67	75	75	164
137	74	85	79	70	76	80	70	83	67	75	75	164
138	74	85	79	70	76	80	70	83	67	75	75	164
139	74	85	79	70	76	80	70	83	67	75	75	164

[a]OBS	[b]ID [d]TOAL-3 AGE (mos.)	NORMAL [c]TOPL AGE (mos.)	NORMAL [d]TOAL-3 AGE (mos.)	[b]ID GRADE	NORMAL GRADE	SEX	DIFFERENCE SCORE [c]TOPL RAW	DIFFERENCE [d]TOAL-3 QUOTIENT	DIFFERENCE [b]ID [c]TOPL [e]AE & TEST AGE	DIFFERENCE NORMAL [c]TOPL [e]AE & TEST AGE	DIFFERENCE AGE [c]TOPL TEST TIME	DIFFERENCE [d]TOAL-3 TEST TIME
105	169	160	161	8	8	M	10	38	76	-26	9	8
106	169	160	161	8	8	M	10	38	76	-26	9	8
107	169	160	161	8	8	M	10	38	76	-26	9	8
108	169	160	161	8	8	M	10	38	76	-26	9	8
109	169	160	161	8	8	M	10	38	76	-26	9	8
110	156	155	156	7	7	F	9	68	68	-7	0	0
111	156	155	156	7	7	F	9	68	68	-7	0	0
112	156	155	156	7	7	F	9	68	68	-7	0	0
113	156	155	156	7	7	F	9	68	68	-7	0	0
114	174	167	167	8	8	M	4	36	34	-19	5	7
115	174	167	167	8	8	M	4	36	34	-19	5	7
116	174	167	167	8	8	M	4	36	34	-19	5	7
117	174	167	167	8	8	M	4	36	34	-19	5	7
118	174	167	167	8	8	M	4	36	34	-19	5	7
119	174	167	167	8	8	M	4	36	34	-19	5	7
120	174	167	167	8	8	M	4	36	34	-19	5	7
121	174	167	167	8	8	M	4	36	34	-19	5	7
122	174	167	167	8	8	M	4	36	34	-19	5	7
123	174	167	167	8	8	M	4	36	34	-19	5	7
124	174	167	167	8	8	M	4	36	34	-19	5	7
125	174	167	167	8	8	M	4	36	34	-19	5	7
126	174	167	167	8	8	M	4	36	34	-19	5	7
127	164	157	158	7	7	M	5	11	65	7	7	6
128	164	157	158	7	7	M	5	11	65	7	7	6
129	164	157	158	7	7	M	5	11	65	7	7	6
130	164	157	158	7	7	M	5	11	65	7	7	6
131	164	157	158	7	7	M	5	11	65	7	7	6
132	164	157	158	7	7	M	5	11	65	7	7	6
133	164	157	158	7	7	M	5	11	65	7	7	6
134	164	157	158	7	7	M	5	11	65	7	7	6
135	164	157	158	7	7	M	5	11	65	7	7	6
136	164	157	158	7	7	M	5	11	65	7	7	6
137	164	157	158	7	7	M	5	11	65	7	7	6
138	164	157	158	7	7	M	5	11	65	7	7	6
139	164	157	158	7	7	M	5	11	65	7	7	6

[a]OBS	DYAD	EXCHANGE	INITIATOR	NUMBER OF TURNS	AFFECT NORMAL	AFFECT [b]ID	JUSTIFI-CATION [b]ID	JUSTIFI-CATION NORMAL	LAST TURN	SPEECH ACT	DISPUTE TOPIC
140	15	14	Disabled	1	Absent	Present	Absent	Absent	Disabled	Request/Action	Lesson Content
141	15	15	Disabled	5	Absent	Present	Present	Present	Disabled	Request/Action	Lesson Content
142	15	16	Disabled	2	Absent	Absent	Absent	Absent	Normal	Request/Action	Lesson Process
143	15	17	Disabled	1	Absent	Absent	Present	Present	Disabled	Statement Fact	Lesson Content
144	15	18	Normal	1	Absent	Absent	Absent	Absent	Normal	Request/Action	Lesson Content
145	15	19	Disabled	1	Absent	Absent	Absent	Absent	Disabled	Request/Action	Lesson Content
146	16	1	Normal	1	Absent	Absent	Absent	Absent	Normal	Statement Fact	Lesson Process
147	16	2	Normal	2	Absent	Absent	Present	Absent	Disabled	Request/Action	Lesson Content
148	16	3	Normal	6	Present	Absent	Present	Present	Disabled	Statement Intent	Lesson Content
149	16	4	Disabled	3	Absent	Absent	Present	Absent	Disabled	Statement Intent	Lesson Process
150	17	1	Normal	1	Absent	Absent	Absent	Present	Normal	Request/Action	Lesson Content
151	17	2	Normal	4	Absent	Absent	Absent	Present	Disabled	Request/Action	Lesson Content
152	17	3	Normal	1	Absent	Absent	Absent	Present	Normal	Request/Action	Lesson Content
153	17	4	Normal	3	Absent	Absent	Absent	Absent	Disabled	Request/Action	Lesson Content
154	17	5	Normal	2	Absent	Absent	Absent	Absent	Normal	Statement Intent	Lesson Process
155	17	6	Disabled	1	Absent	Absent	Absent	Absent	Disabled	Request/Action	Lesson Content
156	17	7	Disabled	6	Present	Present	Present	Present	Normal	Request/Action	Lesson Content
157	17	8	Normal	1	Absent	Absent	Absent	Present	Normal	Request/Action	Lesson Process
158	17	9	Normal	3	Absent	Absent	Absent	Present	Normal	Request/Action	Lesson Content
159	17	10	Disabled	1	Absent	Absent	Present	Absent	Disabled	Request/Action	Lesson Content
160	17	11	Normal	1	Absent	Absent	Absent	Absent	Normal	Request/Action	Lesson Content
161	17	12	Disabled	1	Absent	Absent	Absent	Absent	Disabled	Statement Fact	Lesson Process
162	18	1	Disabled	3	Absent	Absent	Absent	Absent	Disabled	Statement Intent	Lesson Content
163	18	2	Normal	1	Absent	Absent	Absent	Absent	Normal	Request/Action	Lesson Content
164	18	3	Normal	1	Present	Absent	Absent	Present	Normal	Statement Fact	Lesson Content
165	18	4	Normal	1	Present	Absent	Absent	Present	Normal	Request/Action	Lesson Content
166	18	5	Normal	2	Absent	Present	Absent	Absent	Disabled	Request/Action	Lesson Content
167	18	6	Disabled	1	Absent	Present	Absent	Absent	Disabled	Request/Action	Lesson Content
168	18	7	Disabled	2	Present	Absent	Absent	Present	Normal	Request/Action	Lesson Content
169	18	8	Normal	1	Present	Absent	Absent	Present	Normal	Request/Action	Lesson Content
170	18	9	Disabled	6	Present	Present	Absent	Present	Normal	Request/Action	Lesson Content
171	19	1	Disabled	4	Absent	Absent	Present	Present	Normal	Request/Action	Lesson Content
172	19	2	Normal	4	Absent	Absent	Present	Absent	Disabled	Request/Action	Lesson Content
173	19	3	Normal	2	Absent	Absent	Absent	Absent	Disabled	Request/Action	Lesson Content
174	19	4	Disabled	2	Absent	Absent	Present	Absent	Normal	Request/Action	Assistance

[a]OBS	DISPUTE OUTCOME	INITIAL OPPOSE	EXPLICIT NEGATIVE	[b]ID [c]TOPL RAW	[b]ID [c]TOPL [j]%ILE	[b]ID [c]TOPL QUOTIENT	[b]ID [c]TOPL [e]AE (mos.)	[b]ID [d]TOAL-3 TOTAL QUOTIENT	[b]ID [d]TOAL-3 LISTENING QUOTIENT	[b]ID [d]TOAL-3 SPEAKING QUOTIENT	[b]ID [d]TOAL-3 READING QUOTIENT
140	Standoff	Alternative	Absent	33	14	84	99	63	76	70	61
141	Disabled Submits	Alternative	Absent	33	14	84	99	63	76	70	61
142	Compromise	Alternative	Absent	33	14	84	99	63	76	70	61
143	Normal Submits	Alternative	Absent	33	14	84	99	63	76	70	61
144	Disabled Submits	Simple No	Absent	33	14	84	99	63	76	70	61
145	Disabled Submits	Alternative	Absent	33	14	84	99	63	76	70	61
146	Normal Submits	Quest/Challenge	Absent	36	33	93	126	49	55	58	64
147	Normal Submits	Delay/Distract	Absent	36	33	93	126	49	55	58	64
148	Standoff	Justification	Absent	36	33	93	126	49	55	58	64
149	Standoff	Simple No	Present	36	33	93	126	49	55	58	64
150	Disabled Submits	Quest/Challenge	Absent	35	25	90	114	53	64	67	58
151	Normal Submits	Quest/Challenge	Absent	35	25	90	114	53	64	67	58
152	Standoff	Justification	Present	35	25	90	114	53	64	67	58
153	Compromise	Simple No	Present	35	25	90	114	53	64	67	58
154	Disabled Submits	Simple No	Present	35	25	90	114	53	64	67	58
155	Standoff	Alternative	Absent	35	25	90	114	53	64	67	58
156	Compromise	Alternative	Present	35	25	90	114	53	64	67	58
157	Standoff	Justification	Absent	35	25	90	114	53	64	67	58
158	Standoff	Alternative	Present	35	25	90	114	53	64	67	58
159	Normal Submits	Justification	Present	35	25	90	114	53	64	67	58
160	Normal Submits	Alternative	Absent	35	25	90	114	53	64	67	58
161	Normal Submits	Alternative	Absent	35	25	90	114	53	64	67	58
162	Normal Submits	Alternative	Absent	38	.	.	150	47	58	61	49
163	Standoff	Delay/Distract	Absent	38	.	.	150	47	58	61	49
164	Normal Submits	Justification	Absent	38	.	.	150	47	58	61	49
165	Disabled Submits	Delay/Distract	Absent	38	.	.	150	47	58	61	49
166	Normal Submits	Quest/Challenge	Absent	38	.	.	150	47	58	61	49
167	Normal Submits	Delay/Distract	Absent	38	.	.	150	47	58	61	49
168	Disabled Submits	Alternative	Absent	38	.	.	150	47	58	61	49
169	Disabled Submits	Quest/Challenge	Absent	38	.	.	150	47	58	61	49
170	Normal Submits	Alternative	Absent	38	.	.	150	47	58	61	49
171	Disabled Submits	Indirect No	Absent	34	7	78	105	45	64	55	52
172	Normal Submits	Quest/Challenge	Absent	34	7	78	105	45	64	55	52
173	Normal Submits	Alternative	Absent	34	7	78	105	45	64	55	52
174	Compromise	Alternative	Absent	34	7	78	105	45	64	55	52

[a]OBS	[b]ID [d]TOAL-3 WRITING QUOTIENT	[b]ID [d]TOAL-3 SPOKEN [i]LANG. QUOTIENT	[b]ID [d]TOAL-3 WRITTEN [i]LANG. QUOTIENT	[b]ID [d]TOAL-3 [f]VOCAB. QUOTIENT	[b]ID [d]TOAL-3 GRAMMAR QUOTIENT	[b]ID [d]TOAL-3 [g]REC. [i]LANG. QUOTIENT	[b]ID [d]TOAL-3 [h]EXP. [i]LANG. QUOTIENT	NORMAL [c]TOPL RAW	NORMAL [c]TOPL [j]%ILE	NORMAL [c]TOPL QUOTIENT	NORMAL [c]TOPL [e]AE (mos.)
140	67	70	60	72	58	65	65	38	46	98	150
141	67	70	60	72	58	65	65	38	46	98	150
142	67	70	60	72	58	65	65	38	46	98	150
143	67	70	60	72	58	65	65	38	46	98	150
144	67	70	60	72	58	65	65	38	46	98	150
145	67	70	60	72	58	65	65	38	46	98	150
146	49	52	52	57	47	55	48	38	46	98	150
147	49	52	52	57	47	55	48	38	46	98	150
148	49	52	52	57	47	55	48	38	46	98	150
149	49	52	52	57	47	55	48	38	46	98	150
150	49	62	48	52	58	57	53	39	57	103	162
151	49	62	48	52	58	57	53	39	57	103	162
152	49	62	48	52	58	57	53	39	57	103	162
153	49	62	48	52	58	57	53	39	57	103	162
154	49	62	48	52	58	57	53	39	57	103	162
155	49	62	48	52	58	57	53	39	57	103	162
156	49	62	48	52	58	57	53	39	57	103	162
157	49	62	48	52	58	57	53	39	57	103	162
158	49	62	48	52	58	57	53	39	57	103	162
159	49	62	48	52	58	57	53	39	57	103	162
160	49	62	48	52	58	57	53	39	57	103	162
161	49	62	48	52	58	57	53	39	57	103	162
162	49	55	43	52	47	48	50	41	69	107	186
163	49	55	43	52	47	48	50	41	69	107	186
164	49	55	43	52	47	48	50	41	69	107	186
165	49	55	43	52	47	48	50	41	69	107	186
166	49	55	43	52	47	48	50	41	69	107	186
167	49	55	43	52	47	48	50	41	69	107	186
168	49	55	43	52	47	48	50	41	69	107	186
169	49	55	43	52	47	48	50	41	69	107	186
170	49	55	43	52	47	48	50	41	69	107	186
171	46	52	53	48	47	50	45	40	57	103	174
172	46	52	53	48	47	50	45	40	57	103	174
173	46	52	53	48	47	50	45	40	57	103	174
174	46	52	53	48	47	50	45	40	57	103	174

OBS	NORMAL TOAL-3 TOTAL QUOTIENT	NORMAL TOAL-3 LISTENING QUOTIENT	NORMAL TOAL-3 SPEAKING QUOTIENT	NORMAL TOAL-3 READING QUOTIENT	NORMAL TOAL-3 WRITING QUOTIENT	NORMAL TOAL-3 SPOKEN LANG. QUOTIENT	NORMAL TOAL-3 WRITTEN LANG. QUOTIENT	NORMAL TOAL-3 VOCAB. QUOTIENT	NORMAL TOAL-3 GRAMMAR QUOTIENT	NORMAL TOAL-3 REC. LANG. QUOTIENT	NORMAL TOAL-3 EXP. LANG. QUOTIENT	ID TOPL AGE (mos.)
140	74	85	79	70	76	80	70	83	67	75	75	164
141	74	85	79	70	76	80	70	83	67	75	75	164
142	74	85	79	70	76	80	70	83	67	75	75	164
143	74	85	79	70	76	80	70	83	67	75	75	164
144	74	85	79	70	76	80	70	83	67	75	75	164
145	74	85	79	70	76	80	70	83	67	75	75	164
146	83	94	67	100	79	78	88	85	82	97	70	161
147	83	94	67	100	79	78	88	85	82	97	70	161
148	83	94	67	100	79	78	88	85	82	97	70	161
149	83	94	67	100	79	78	88	85	82	97	70	161
150	109	100	88	124	118	93	123	95	122	113	103	159
151	109	100	88	124	118	93	123	95	122	113	103	159
152	109	100	88	124	118	93	123	95	122	113	103	159
153	109	100	88	124	118	93	123	95	122	113	103	159
154	109	100	88	124	118	93	123	95	122	113	103	159
155	109	100	88	124	118	93	123	95	122	113	103	159
156	109	100	88	124	118	93	123	95	122	113	103	159
157	109	100	88	124	118	93	123	95	122	113	103	159
158	109	100	88	124	118	93	123	95	122	113	103	159
159	109	100	88	124	118	93	123	95	122	113	103	159
160	109	100	88	124	118	93	123	95	122	113	103	159
161	109	100	88	124	118	93	123	95	122	113	103	159
162	92	79	97	112	85	87	98	97	88	95	90	179
163	92	79	97	112	85	87	98	97	88	95	90	179
164	92	79	97	112	85	87	98	97	88	95	90	179
165	92	79	97	112	85	87	98	97	88	95	90	179
166	92	79	97	112	85	87	98	97	88	95	90	179
167	92	79	97	112	85	87	98	97	88	95	90	179
168	92	79	97	112	85	87	98	97	88	95	90	179
169	92	79	97	112	85	87	98	97	88	95	90	179
170	92	79	97	112	85	87	98	97	88	95	90	179
171	88	97	79	79	103	87	90	90	87	87	90	183
172	88	97	79	79	103	87	90	90	87	87	90	183
173	88	97	79	79	103	87	90	90	87	87	90	183
174	88	97	79	79	103	87	90	90	87	87	90	183

[a]OBS	[b]ID [d]TOAL-3 AGE (mos.)	NORMAL [c]TOPL AGE (mos.)	NORMAL [d]TOAL-3 AGE (mos.)	[b]ID GRADE	NORMAL GRADE	SEX	DIFFERENCE SCORE [c]TOPL RAW	DIFFERENCE [d]TOAL-3 QUOTIENT	DIFFERENCE [b]ID [c]TOPL [a]AE & TEST AGE	DIFFERENCE NORMAL [c]TOPL [a]AE & TEST AGE	DIFFERENCE AGE [c]TOPL TEST TIME	DIFFERENCE [d]TOAL-3 TEST TIME
140	164	157	158	7	7	M	5	11	65	7	7	6
141	164	157	158	7	7	M	5	11	65	7	7	6
142	164	157	158	7	7	M	5	11	65	7	7	6
143	164	157	158	7	7	M	5	11	65	7	7	6
144	164	157	158	7	7	M	5	11	65	7	7	6
145	164	157	158	7	7	M	5	11	65	7	7	6
146	163	158	160	7	7	M	2	34	35	8	3	3
147	163	158	160	7	7	M	2	34	35	8	3	3
148	163	158	160	7	7	M	2	34	35	8	3	3
149	163	158	160	7	7	M	2	34	35	8	3	3
150	161	154	155	7	7	F	4	56	45	-8	5	6
151	161	154	155	7	7	F	4	56	45	-8	5	6
152	161	154	155	7	7	F	4	56	45	-8	5	6
153	161	154	155	7	7	F	4	56	45	-8	5	6
154	161	154	155	7	7	F	4	56	45	-8	5	6
155	161	154	155	7	7	F	4	56	45	-8	5	6
156	161	154	155	7	7	F	4	56	45	-8	5	6
157	161	154	155	7	7	F	4	56	45	-8	5	6
158	161	154	155	7	7	F	4	56	45	-8	5	6
159	161	154	155	7	7	F	4	56	45	-8	5	6
160	161	154	155	7	7	F	4	56	45	-8	5	6
161	161	154	155	7	7	F	4	56	45	-8	5	6
162	180	155	162	7	7	F	3	45	29	-31	24	25
163	180	155	162	7	7	F	3	45	29	-31	24	25
164	180	155	162	7	7	F	3	45	29	-31	24	25
165	180	155	162	7	7	F	3	45	29	-31	24	25
166	180	155	162	7	7	F	3	45	29	-31	24	25
167	180	155	162	7	7	F	3	45	29	-31	24	25
168	180	155	162	7	7	F	3	45	29	-31	24	25
169	180	155	162	7	7	F	3	45	29	-31	24	25
170	180	155	162	7	7	F	3	45	29	-31	24	25
171	184	161	163	8	8	M	6	43	78	-13	22	22
172	184	161	163	8	8	M	6	43	78	-13	22	22
173	184	161	163	8	8	M	6	43	78	-13	22	22
174	184	161	163	8	8	M	6	43	78	-13	22	22

[a]OBS	DYAD	EXCHANGE	INITIATOR	NUMBER OF TURNS	AFFECT NORMAL	AFFECT [b]ID	JUSTIFI-CATION [b]ID	JUSTIFI-CATION NORMAL	LAST TURN	SPEECH ACT	DISPUTE TOPIC
175	20	1	Normal	2	Absent	Present	Present	Absent	Disabled	Request/Action	Lesson Content
176	20	2	Normal	1	Absent	Absent	Absent	Absent	Normal	Request/Action	Lesson Content
177	20	3	Normal	2	Absent	Present	Absent	Absent	Disabled	Request/Action	Lesson Content
178	20	4	Normal	1	Present	Absent	Absent	Present	Normal	Request/Action	Lesson Process
179	20	5	Normal	7	Present	Absent	Present	Present	Normal	Request/Action	Lesson Content
180	20	6	Disabled	3	Absent	Present	Absent	Absent	Disabled	Statement Intent	Lesson Content
181	20	7	Normal	1	Absent	Absent	Absent	Absent	Normal	Request/Action	Lesson Process
182	21	1	Disabled	1	Absent	Absent	Absent	Absent	Disabled	Request/Action	Lesson Process
183	21	2	Disabled	4	Absent	Absent	Absent	Present	Normal	Request/Action	Lesson Content
184	21	3	Normal	1	Absent	Absent	Absent	Present	Normal	Statement Intent	Lesson Content
185	21	4	Disabled	2	Absent	Absent	Absent	Present	Normal	Request/Action	Lesson Content
186	21	5	Disabled	2	Absent	Absent	Absent	Absent	Normal	Request/Action	Lesson Content
187	21	6	Disabled	2	Absent	Absent	Absent	Present	Normal	Request/Action	Lesson Content
188	21	7	Normal	6	Absent	Absent	Absent	Present	Disabled	Request/Action	Lesson Content
189	21	8	Disabled	1	Absent	Absent	Absent	Absent	Disabled	Request/Action	Lesson Content
190	22	1	Normal	2	Absent	Absent	Absent	Present	Disabled	Request/Action	Lesson Content
191	22	2	Normal	2	Absent	Absent	Present	Absent	Disabled	Request/Action	Lesson Content
192	23	1	Normal	1	Absent	Absent	Absent	Absent	Normal	Request/Action	Lesson Content
193	23	2	Normal	1	Absent	Absent	Absent	Present	Normal	Request/Action	Lesson Content
194	23	3	Normal	1	Absent	Absent	Absent	Absent	Normal	Request/Action	Lesson Content
195	23	4	Normal	1	Absent	Absent	Absent	Present	Normal	Request/Action	Lesson Process
196	23	5	Normal	6	Absent	Absent	Present	Present	Disabled	Request/Action	Lesson Process
197	23	6	Normal	5	Present	Present	Absent	Present	Disabled	Request/Action	Lesson Content
198	23	7	Normal	2	Absent	Absent	Absent	Absent	Disabled	Request/Action	Lesson Content
199	23	8	Normal	6	Absent	Absent	Present	Present	Disabled	Statement Intent	Lesson Content
200	23	9	Disabled	1	Absent	Absent	Absent	Absent	Disabled	Request/Action	Lesson Content
201	23	10	Normal	1	Absent	Absent	Absent	Absent	Disabled	Request/Action	Lesson Content
202	23	11	Disabled	2	Present	Present	Absent	Absent	Normal	Request/Action	Lesson Content
203	24	1	Normal	1	Absent	Absent	Absent	Present	Normal	Statement Intent	Lesson Content
204	24	2	Normal	2	Absent	Absent	Present	Absent	Disabled	Request/Action	Lesson Content
205	24	3	Normal	2	Absent	Absent	Present	Absent	Disabled	Request/Action	Lesson Content
206	24	4	Normal	1	Absent	Absent	Absent	Absent	Normal	Request/Action	Lesson Content
207	24	5	Normal	1	Absent	Absent	Absent	Absent	Normal	Statement Fact	Lesson Content
208	24	6	Disabled	1	Absent	Absent	Absent	Absent	Disabled	Request/Action	Lesson Content
209	24	7	Normal	1	Absent	Absent	Absent	Absent	Normal	Request/Action	Lesson Content

[a]OBS	DISPUTE OUTCOME	INITIAL OPPOSE	EXPLICIT NEGATIVE	[b]ID [c]TOPL RAW	[b]ID [c]TOPL [j]%ILE	[b]ID [c]TOPL QUOTIENT	[b]ID [c]TOPL [a]AE (mos.)	[b]ID [d]TOAL-3 TOTAL QUOTIENT	[b]ID [d]TOAL-3 LISTENING QUOTIENT	[b]ID [d]TOAL-3 SPEAKING QUOTIENT	[b]ID [d]TOAL-3 READING QUOTIENT
175	Standoff	Quest/Challenge	Absent	31	7	78	90	52	64	55	61
176	Compromise	Alternative	Absent	31	7	78	90	52	64	55	61
177	Normal Submits	Quest/Challenge	Absent	31	7	78	90	52	64	55	61
178	Disabled Submits	Justification	Present	31	7	78	90	52	64	55	61
179	Disabled Submits	Alternative	Absent	31	7	78	90	52	64	55	61
180	Standoff	Alternative	Absent	31	7	78	90	52	64	55	61
181	Standoff	Alternative	Absent	31	7	78	90	52	64	55	61
182	Normal Submits	Alternative	Present	37	40	96	138	58	73	67	61
183	Disabled Submits	Simple No	Present	37	40	96	138	58	73	67	61
184	Disabled Submits	Justification	Absent	37	40	96	138	58	73	67	61
185	Disabled Submits	Quest/Challenge	Absent	37	40	96	138	58	73	67	61
186	Disabled Submits	Alternative	Absent	37	40	96	138	58	73	67	61
187	Disabled Submits	Indirect No	Absent	37	40	96	138	58	73	67	61
188	Normal Submits	Alternative	Absent	37	40	96	138	58	73	67	61
189	Normal Submits	Alternative	Absent	37	40	96	138	58	73	67	61
190	Normal Submits	Justification	Absent	33	.	.	99	45	64	52	49
191	Normal Submits	Quest/Challenge	Absent	33	.	.	99	45	64	52	49
192	Standoff	Simple No	Present	34	.	.	105	60	73	67	52
193	Disabled Submits	Alternative	Absent	34	.	.	105	60	73	67	52
194	Standoff	Delay/Distract	Absent	34	.	.	105	60	73	67	52
195	Disabled Submits	Alternative	Absent	34	.	.	105	60	73	67	52
196	Compromise	Quest/Challenge	Absent	34	.	.	105	60	73	67	52
197	Standoff	Quest/Challenge	Absent	34	.	.	105	60	73	67	52
198	Compromise	Delay/Distract	Absent	34	.	.	105	60	73	67	52
199	Compromise	Delay/Distract	Absent	34	.	.	105	60	73	67	52
200	Disabled Submits	Indirect No	Absent	34	.	.	105	60	73	67	52
201	Disabled Submits	Delay/Distract	Absent	34	.	.	105	60	73	67	52
202	Disabled Submits	Delay/Distract	Absent	34	.	.	105	60	73	67	52
203	Disabled Submits	Alternative	Absent	32	12	83	93	65	64	82	61
204	Normal Submits	Quest/Challenge	Absent	32	12	83	93	65	64	82	61
205	Standoff	Quest/Challenge	Absent	32	12	83	93	65	64	82	61
206	Standoff	Simple No	Present	32	12	83	93	65	64	82	61
207	Disabled Submits	Alternative	Absent	32	12	83	93	65	64	82	61
208	Normal Submits	Alternative	Absent	32	12	83	93	65	64	82	61
209	Disabled Submits	Alternative	Absent	32	12	83	93	65	64	82	61

[a]OBS	[b]ID [d]TOAL-3 WRITING QUOTIENT	[b]ID [d]TOAL-3 SPOKEN [i]LANG. QUOTIENT	[b]ID [d]TOAL-3 WRITTEN [i]LANG. QUOTIENT	[b]ID [d]TOAL-3 [f]VOCAB. QUOTIENT	[b]ID [d]TOAL-3 GRAMMAR QUOTIENT	[b]ID [d]TOAL-3 [g]REC. [i]LANG. QUOTIENT	[b]ID [d]TOAL-3 [h]EXP. [i]LANG. QUOTIENT	NORMAL [c]TOPL RAW	NORMAL [c]TOPL [j]%ILE	NORMAL [c]TOPL QUOTIENT	NORMAL [c]TOPL [e]AE (mos.)
175	55	55	53	52	57	58	50	37	40	96	138
176	55	55	53	52	57	58	50	37	40	96	138
177	55	55	53	52	57	58	50	37	40	96	138
178	55	55	53	52	57	58	50	37	40	96	138
179	55	55	53	52	57	58	50	37	40	96	138
180	55	55	53	52	57	58	50	37	40	96	138
181	55	55	53	52	57	58	50	37	40	96	138
182	55	67	53	58	62	63	57	41	69	107	186
183	55	67	53	58	62	63	57	41	69	107	186
184	55	67	53	58	62	63	57	41	69	107	186
185	55	67	53	58	62	63	57	41	69	107	186
186	55	67	53	58	62	63	57	41	69	107	186
187	55	67	53	58	62	63	57	41	69	107	186
188	55	67	53	58	62	63	57	41	69	107	186
189	55	67	53	58	62	63	57	41	69	107	186
190	46	53	42	48	47	52	43	36	.	.	126
191	46	53	42	48	47	52	43	36	.	.	162
192	70	67	57	62	62	58	65	40	57	103	174
193	70	67	57	62	62	58	65	40	57	103	174
194	70	67	57	62	62	58	65	40	57	103	174
195	70	67	57	62	62	58	65	40	57	103	174
196	70	67	57	62	62	58	65	40	57	103	174
197	70	67	57	62	62	58	65	40	57	103	174
198	70	67	57	62	62	58	65	40	57	103	174
199	70	67	57	62	62	58	65	40	57	103	174
200	70	67	57	62	62	58	65	40	57	103	174
201	70	67	57	62	62	58	65	40	57	103	174
202	70	67	57	62	62	58	65	40	57	103	174
203	73	70	63	67	67	58	75	40	62	105	174
204	73	70	63	67	67	58	75	40	62	105	174
205	73	70	63	67	67	58	75	40	62	105	174
206	73	70	63	67	67	58	75	40	62	105	174
207	73	70	63	67	67	58	75	40	62	105	174
208	73	70	63	67	67	58	75	40	62	105	174
209	73	70	63	67	67	58	75	40	62	105	174

OBS	NORMAL TOAL-3 TOTAL QUOTIENT	NORMAL TOAL-3 LISTENING QUOTIENT	NORMAL TOAL-3 SPEAKING QUOTIENT	NORMAL TOAL-3 READING QUOTIENT	NORMAL TOAL-3 WRITING QUOTIENT	NORMAL TOAL-3 SPOKEN LANG. QUOTIENT	NORMAL TOAL-3 WRITTEN LANG. QUOTIENT	NORMAL TOAL-3 VOCAB. QUOTIENT	NORMAL TOAL-3 GRAMMAR QUOTIENT	NORMAL TOAL-3 REC. LANG. QUOTIENT	NORMAL TOAL-3 EXP. LANG. QUOTIENT	ID TOPL AGE (mos.)
175	95	82	112	82	106	97	93	105	85	80	110	160
176	95	82	112	82	106	97	93	105	85	80	110	160
177	95	82	112	82	106	97	93	105	85	80	110	160
178	95	82	112	82	106	97	93	105	85	80	110	160
179	95	82	112	82	106	97	93	105	85	80	110	160
180	95	82	112	82	106	97	93	105	85	80	110	160
181	95	82	112	82	106	97	93	105	85	80	110	160
182	97	97	97	106	91	97	98	93	102	102	93	156
183	97	97	97	106	91	97	98	93	102	102	93	156
184	97	97	97	106	91	97	98	93	102	102	93	156
185	97	97	97	106	91	97	98	93	102	102	93	156
186	97	97	97	106	91	97	98	93	102	102	93	156
187	97	97	97	106	91	97	98	93	102	102	93	156
188	97	97	97	106	91	97	98	93	102	102	93	156
189	97	97	97	106	91	97	98	93	102	102	93	156
190	67	57	52	53	53	63	73	63	73	77	60	183
191	67	57	52	53	53	63	73	63	73	77	60	183
192	110	118	118	106	94	120	100	122	98	113	107	173
193	110	118	118	106	94	120	100	122	98	113	107	173
194	110	118	118	106	94	120	100	122	98	113	107	173
195	110	118	118	106	94	120	100	122	98	113	107	173
196	110	118	118	106	94	120	100	122	98	113	107	173
197	110	118	118	106	94	120	100	122	98	113	107	173
198	110	118	118	106	94	120	100	122	98	113	107	173
199	110	118	118	106	94	120	100	122	98	113	107	173
200	110	118	118	106	94	120	100	122	98	113	107	173
201	110	118	118	106	94	120	100	122	98	113	107	173
202	110	118	118	106	94	120	100	122	98	113	107	173
203	94	103	94	100	82	98	90	93	95	102	87	155
204	94	103	94	100	82	98	90	93	95	102	87	155
205	94	103	94	100	82	98	90	93	95	102	87	155
206	94	103	94	100	82	98	90	93	95	102	87	155
207	94	103	94	100	82	98	90	93	95	102	87	155
208	94	103	94	100	82	98	90	93	95	102	87	155
209	94	103	94	100	82	98	90	93	95	102	87	155

[a]OBS	[b]ID [d]TOAL-3 AGE (mos.)	NORMAL [c]TOPL AGE (mos.)	NORMAL [d]TOAL-3 AGE (mos.)	[b]ID GRADE	NORMAL GRADE	SEX	DIFFERENCE SCORE [c]TOPL RAW	DIFFERENCE [d]TOAL-3 QUOTIENT	DIFFERENCE [b]ID [c]TOPL [a]AE & TEST AGE	DIFFERENCE NORMAL [c]TOPL [a]AE & TEST AGE	DIFFERENCE AGE [c]TOPL TEST TIME	DIFFERENCE [d]TOAL-3 TEST TIME
175	160	162	163	8	8	M	6	43	70	24	-2	-3
176	160	162	163	8	8	M	6	43	70	24	-2	-3
177	160	162	163	8	8	M	6	43	70	24	-2	-3
178	160	162	163	8	8	M	6	43	70	24	-2	-3
179	160	162	163	8	8	M	6	43	70	24	-2	-3
180	160	162	163	8	8	M	6	43	70	24	-2	-3
181	160	162	163	8	8	M	6	43	70	24	-2	-3
182	157	148	148	7	7	F	4	39	18	-38	8	9
183	157	148	148	7	7	F	4	39	18	-38	8	9
184	157	148	148	7	7	F	4	39	18	-38	8	9
185	157	148	148	7	7	F	4	39	18	-38	8	9
186	157	148	148	7	7	F	4	39	18	-38	8	9
187	157	148	148	7	7	F	4	39	18	-38	8	9
188	157	148	148	7	7	F	4	39	18	-38	8	9
189	157	148	148	7	7	F	4	39	18	-38	8	9
190	183	170	171	9	9	F	3	22	84	44	13	12
191	183	170	171	9	9	F	3	22	84	44	13	12
192	173	157	158	8	8	M	6	50	68	-17	16	15
193	173	157	158	8	8	M	6	50	68	-17	16	15
194	173	157	158	8	8	M	6	50	68	-17	16	15
195	173	157	158	8	8	M	6	50	68	-17	16	15
196	173	157	158	8	8	M	6	50	68	-17	16	15
197	173	157	158	8	8	M	6	50	68	-17	16	15
198	173	157	158	8	8	M	6	50	68	-17	16	15
199	173	157	158	8	8	M	6	50	68	-17	16	15
200	173	157	158	8	8	M	6	50	68	-17	16	15
201	173	157	158	8	8	M	6	50	68	-17	16	15
202	173	157	158	8	8	M	6	50	68	-17	16	15
203	155	149	149	7	7	F	8	29	62	-25	6	6
204	155	149	149	7	7	F	8	29	62	-25	6	6
205	155	149	149	7	7	F	8	29	62	-25	6	6
206	155	149	149	7	7	F	8	29	62	-25	6	6
207	155	149	149	7	7	F	8	29	62	-25	6	6
208	155	149	149	7	7	F	8	29	62	-25	6	6
209	155	149	149	7	7	F	8	29	62	-25	6	6

[a]OBS	DYAD	EXCHANGE	INITIATOR	NUMBER OF TURNS	AFFECT NORMAL	AFFECT [b]ID	JUSTIFI-CATION [b]ID	JUSTIFI-CATION NORMAL	LAST TURN	SPEECH ACT	DISPUTE TOPIC
210	25	1	Disabled	1	Absent	Absent	Absent	Absent	Normal	Request/Action	Lesson Content
211	25	2	Normal	5	Present	Present	Absent	Absent	Normal	Request/Action	Lesson Content

[a]OBS	DISPUTE OUTCOME	INITIAL OPPOSE	EXPLICIT NEGATIVE	[b]ID [c]TOPL RAW	[b]ID [c]TOPL [j]%ILE	[b]ID [c]TOPL QUOTIENT	[b]ID [c]TOPL [e]AE (mos.)	[b]ID [d]TOAL-3 TOTAL QUOTIENT	[b]ID [d]TOAL-3 LISTENING QUOTIENT	[b]ID [d]TOAL-3 SPEAKING QUOTIENT	[b]ID [d]TOAL-3 READING QUOTIENT
210	Disabled Submits	Quest/Challenge	Absent	35	31	92	114	68	91	64	67
211	Standoff	Delay/Distract	Present	35	31	92	114	68	91	64	67

[a]OBS	[b]ID [d]TOAL-3 WRITING QUOTIENT	[b]ID [d]TOAL-3 SPOKEN [i]LANG. QUOTIENT	[b]ID [d]TOAL-3 WRITTEN [i]LANG. QUOTIENT	[b]ID [d]TOAL-3 [f]VOCAB. QUOTIENT	[b]ID [d]TOAL-3 GRAMMAR QUOTIENT	[b]ID [d]TOAL-3 [g]REC. [i]LANG. QUOTIENT	[b]ID [d]TOAL-3 [h]EXP. [i]LANG. QUOTIENT	NORMAL [c]TOPL RAW	NORMAL [c]TOPL [j]%ILE	NORMAL [c]TOPL QUOTIENT	NORMAL [c]TOPL [e]AE (mos.)
210	67	75	63	72	67	77	62	39	57	103	162
211	67	75	63	72	67	77	62	39	57	103	162

[a]OBS	NORMAL [d]TOAL-3 TOTAL QUOTIENT	NORMAL [d]TOAL-3 LISTENING QUOTIENT	NORMAL [d]TOAL-3 SPEAKING QUOTIENT	NORMAL [d]TOAL-3 READING QUOTIENT	NORMAL [d]TOAL-3 WRITING QUOTIENT	NORMAL [d]TOAL-3 SPOKEN [i]LANG. QUOTIENT	NORMAL [d]TOAL-3 WRITTEN [i]LANG. QUOTIENT	NORMAL [d]TOAL-3 [f]VOCAB. QUOTIENT	NORMAL [d]TOAL-3 GRAMMAR QUOTIENT	NORMAL [d]TOAL-3 [g]REC. [i]LANG. QUOTIENT	NORMAL [d]TOAL-3 [h]EXP. [i]LANG. QUOTIENT	[b]ID [c]TOPL AGE (mos.)
210	72	70	70	94	70	67	80	77	70	80	67	155
211	72	70	70	94	70	67	80	77	70	80	67	155

[a]OBS	[b]ID [d]TOAL-3 AGE (mos.)	NORMAL [c]TOPL AGE (mos.)	NORMAL [d]TOAL-3 AGE (mos.)	[b]ID GRADE	NORMAL GRADE	SEX	DIFFERENCE SCORE [c]TOPL RAW	DIFFERENCE [d]TOAL-3 QUOTIENT	DIFFERENCE [b]ID [c]TOPL [e]AE & TEST AGE	DIFFERENCE NORMAL [c]TOPL [e]AE & TEST AGE	DIFFERENCE AGE [c]TOPL TEST TIME	DIFFERENCE [d]TOAL-3 TEST TIME
210	156	151	150	7	7	F	4	4	41	-11	4	6
211	156	151	150	7	7	F	4	4	41	-11	4	6

Legend

[a]OBS: Observation (each of the 211 conflicts was assigned an observation number)

[b]ID: Intellectually Disabled

[c]TOPL: Test of Pragmatic Language

[d]TOAL-3: Test of Adolescent and Adult Language (3rd ed.)

[e]AE: Age Equivalency

[f]Vocab: Vocabulary

[g]Rec: Receptive

[h]Exp: Expressive

[i]Lang: Language

[j]%ile: Percentile

Appendix G

Conflict Length by Initial Opposition Move

Table G-1: Conflict Length by Initial Opposition Move (Normal Student Initiates Disagreement)

No. of Turns*	Simple No	Indirect No	Justification	Alternative	Delay/ Distract	Question/ Challenge	Total
1	5	5	13	26	8	6	63
2	2	1	10	7	4	12	36
3	4	1	2	2	1	5	15
4	0	0	0	1	1	3	5
5	0	0	0	2	1	1	4
6	0	0	1	3	1	3	8
7	0	0	0	1	0	0	1
8	0	0	0	1	0	0	1
9	0	0	0	0	0	0	0
10	0	0	1	0	0	0	1
15	0	0	0	0	0	1	1
Total	11	7	27	43	16	31	135

*No. of Turns: Number of conversational turns.

Table G-2: Conflict Length by Initial Opposition Move (Intellectually Disabled Student Initiates Disagreement)

No. of Turns*	Simple No	Indirect No	Justification	Alternative	Delay/ Distract	Question/ Challenge	Total
1	6	5	7	13	4	4	39
2	1	3	3	6	4	2	19
3	1	2	1	4	0	1	9
4	1	1	0	0	0	1	3
5	0	0	0	1	0	0	1
6	0	0	0	2	0	1	3
7	0	0	0	1	0	0	1
8	0	0	0	0	0	0	0
9	0	0	1	0	0	0	1
10	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0
Total	9	11	12	27	8	9	76

*No. of Turns: Number of conversational turns.