

From Persuasion to Learning: An Intervention to Improve  
Leaders' Response to Disagreement

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**Abstract**

In this study we bring together Argyris and Schon's theories of interpersonal effectiveness and research on negotiation to develop a model of effective leadership behavior in conversations involving actual or anticipated disagreement. A concurrent mixed methods design was used to assess shifts in how 18 Australian superintendents responded to disagreement that arose in conversations about performance problems. The intervention included discussion of the model and its application to participants' own practice through analysis of transcripts, modeling, coaching and feedback. Assessments of conversation skills and outcomes showed moderate to large intervention effects. The implications for leadership development and double-loop learning are discussed.

### **From Persuasion to Learning:**

#### **An Intervention to Improve Leaders' Response to Disagreement**

Educational leaders at all levels are under increasing pressure to focus on the improvement of teaching and learning (Pont, Nusche & David, 2008). In many cases, the pursuit of such improvement requires superintendents, principals or teacher leaders to discuss perceived teaching problems with those responsible for addressing them. Sustained improvement is unlikely unless leaders are confident and capable in discussing problems in ways that simultaneously progress the issues while building trust and commitment (Bryk & Schneider, 2002).

There is considerable evidence that when leaders anticipate or encounter disagreement, such conversations are likely to be stressful and ineffective (Bridges, 1990; Cardno, 2007; Knight, 2009; Menuey, 2007; Yariv, 2004; Zimmerman, 2006). This is true whether the context is formal or informal evaluation and accountability (Crow & Weindling, 2010; Painter, 2000; Yariv, 2004), professional learning (City, Fiarman & Teitel, 2009) or the discussion of parental complaints (Goldring, 1990; Robinson & Le Fevre, 2011).

Our first purpose in this paper is to provide detailed behavioral evidence about how educational leaders respond to anticipated or actual disagreement in conversations they describe as important and difficult. Our second purpose is to move beyond *describing* the difficulties they experience, to evaluating a theoretically-based intervention designed to *improve* their effectiveness in responding to such disagreements. We begin by bringing together theories of interpersonal effectiveness, negotiation, and conflict resolution to identify what makes these conversations so difficult. This literature also informs our theoretical framework for an intervention program designed to increase leaders' ability to respond effectively to anticipated or actual disagreement. Our concept of effectiveness embraces

satisfactory relationship outcomes and progress on the educational task that is the focus of the conversation.

### **Argyris and Schön's Theory of Interpersonal Effectiveness**

In the 1970s, Argyris and Schön began an extensive program of research on the theories of action people employed in real life conversations in which important decisions were being made (Argyris & Schön, 1974). From the point of view of the observer, a theory of action provides an explanation of behavior; from the point of view of the actor, a theory of action is a theory of design – it specifies how to achieve what one wants in a given situation. Theories of action have three components. First, governing variables include key assumptions about the situation and about how to position oneself and others in the conversation. Second, action strategies are behaviors designed to keep the governing variables within an acceptable range. For example a leader may not disclose her evaluation of a teacher's lesson because she believes that such disclosure will create unacceptable levels of emotional distress. From a pattern of nondisclosure, it may be reasonable to attribute avoidance of negative emotion as a governing variable in the leader's theory of action for that conversation. The third component of a theory of action comprises the intended and unintended consequences of the actions – in this case the intended consequence of avoiding upset may be achieved but the unintended consequence may also be that little progress is made on the perceived teaching problem.

Through comparison of people's talk about their conversations with recordings of their actual conversations, Argyris and Schön have shown that the theories of action people espouse for a conversation are typically quite different from those they actually employ. That is why they make the distinction between two types of theory of action; espoused theories and theories-in-use. The former are derived from peoples' reports about the conversations they intend to or have had and the latter are derived from behavioral evidence of their actual conversation (Argyris, 1982). From analyses of transcripts of hundreds of real on the job

meetings and conversations, Argyris and Schön demonstrated that the predominant theory-in-use was what they called Model 1. Model 1 is commonly used in situations of anticipated or actual threat or embarrassment to self or others—emotions which are often evoked by perceptions of disagreement. The key governing variables of Model 1 are to win and avoid losing, and to do so with the minimal possible negative emotion. The action strategies that follow from these governing variables differ depending on whether a “hard sell” or a “soft sell” version of winning is employed. In the hard sell version, winning is achieved through persuasion in which the leader’s views are strongly advocated with little inquiry into the reactions and views of other parties. Anticipated difference or disagreement is managed by ignoring it, repeating or elaborating one’s own position and avoiding inquiry into the other’s position. Model 1 processes limit learning about the validity of taken for granted assumptions about self, other and the situation. Since there is limited inquiry into and exploration of others’ interests, doubts and disagreements, they are likely to be externally rather than internally committed to any resulting decisions (Argyris, 1976b; Bambacas & Patrickson, 2008).

While Model 1 is widely practised but seldom espoused, the converse is true for Model 2 (Argyris & Schön, 1974, 1996). In a Model 2 theory-in-use, the governing variables are respect for self and other, the pursuit of valid information and promotion of internal rather than external commitment. Respect for self involves communicating one’s own agenda and interests; respect for others involves equal concern for the preferences and interests of others especially when they differ from our own. Such concern is evident in deep inquiry into others’ views and checking rather than assuming the accuracy of our understanding.

In many ways, behaving congruently with the valid information imperative requires integrating the values of science into interpersonal interactions, so that even though formal procedures of testing and experimentation are not possible, their interpersonal equivalents

enable learning about the validity of our thinking and decision-making (Lipshitz, Popper, & Friedman, 2002; Popper & Lipshitz, 1998). These informal equivalents include such action strategies as disclosure of one's own views while enabling others to test their validity by exemplifying abstract claims and making one's reasoning clear.

The third governing variable – seek internal commitment - has important implications for how one responds to actual or anticipated disagreement. In Model 2, perceived or suspected doubts or disagreement trigger inquiry and checking rather than heightened persuasion to one's own point of view. This promotes internal rather than external commitment because doubts about courses of action are listened to and addressed rather than suppressed. Emotions are discussable and managed in a way that cares for people and the task without unilaterally sacrificing either (Argyris, 1990).

In Model 1, learning is typically restricted to single-loop issues, while Model 2 enables both single and double-loop learning (Argyris, 1976a). Single-loop learning is evident when a leader reacts to a failed strategy by adopting another without examining taken-for-granted assumptions about what is required. Double-loop learning occurs when failure triggers deeper inquiry into assumptions about the nature of the problem and how it should be addressed.

While Argyris and Schön have left a rich legacy of descriptive and intervention research designed to help people shift towards more Model 2 theories-in-use, few other researchers have taken up the challenge of conducting and evaluating similar interventions (Lipshitz, 2000). This is possibly due to the difficulty, for both researchers and research participants, of learning how to put their theories into practice. Given the promise that Model 2 offers of alleviating the frequently described counter-productive responses to interpersonal disagreement, we think it important, despite the difficulties, to refine and test the applicability and effectiveness of Argyris and Schön's approach.

### **Enriching the Argyris and Schön Theory of Interpersonal Effectiveness**

Rather than uncritically adopt Argyris and Schön as the normative theory of interpersonal effectiveness in this study, we supplemented their theory with insights drawn from other research into interpersonal responses to difference and disagreement. Argyris's claims about the pervasiveness of Model 1 theories-in-use receive some support from recent research in cognitive psychology. Talking in abstractions, jumping to conclusions and perceiving the world exclusively from our own perspective are inimical to testing the validity of our views. Yet such cognitive shortcuts are essential adaptations to our limited memory and information processing capacities because such heuristics enable sense-making and quick action (De Dreu, Beersma, Steinel, & Van Kleef, 2007; Dunning, 2012; Kahneman, 2011). The price we pay for such efficiency, however, is that we bypass rather than engage with difference and, in so doing, may damage relationships and limit how we learn from and with others (De Dreu, 2010; De Dreu et al., 2007). To bypass difference is to ignore or rebut it, or treat it as a cue to further elaborate and explain one's own position. In contrast, to engage difference, is to listen to and probe the other's thinking in order to understand it more deeply (Friedman, Razer, & Sykes, 2004).

Similar confirmation of the prevalence of Model 1's closed rather open response to differing views and information comes from a meta-analysis of research on selective attention (Hart, Albarracin, Eagly, Brechan, Lindberg, & Merrill, 2009). When there are alternative types of information at hand, are people motivated to seek the more accurate information (accuracy motivation) or the information which confirms their prior views (defense motivation)? The authors defined defense motivation as "the desire to defend one's existing attitudes, beliefs, and behaviors and accuracy motivation as "the desire to form accurate appraisals of stimuli" (Hart et al., p. 557). When it comes to selecting information, people are

about twice as likely to select confirming rather than disconfirming information. Accuracy motivation, which is similar to Argyris's valid information construct, is more likely to predominate when people are accountable for their interpersonal behavior, are prompted to think about counterfactuals and perceive the utility of the uncongenial information for their goal achievement (De Dreu, 2010).

Research on interpersonal negotiation is also relevant to the development of our normative model because negotiation involves "communication between parties aimed at resolving differences" (De Dreu, 2010, p. 1003). From this literature we drew on research on the interaction patterns associated with more and less effective negotiation outcomes. Integrative agreements - that is those which "meet both parties' needs and integrate both parties' aspirations" (De Dreu et al., 2007, p. 608) are preferred, because they provide more positive task and relationship outcomes. Positive task outcomes include solutions which address valid concerns, interests, and situational requirements. Positive relationship outcomes include greater satisfaction, trust, and commitment to the accurate implementation of the agreement (De Dreu, 2010; Rahim, 2002).

The interpersonal behaviors associated with integrative agreements are described in the negotiation literature as problem-solving, which involves searching for or providing information about preferences and priorities, the verification of insights and making cooperative statements such as expressing a desire to work together (De Dreu, et al., 2007). These behaviors have considerable affinity with the deep inquiry and engagement processes associated with Model 2.

### **A Model of Interpersonal Effectiveness in Contexts of Difference and Disagreement**

While the model of interpersonal effectiveness employed in this study was largely based on Argyris and Schön's Model 2, we adapted their model to include an additional focus on the problem-solving strategies associated with integrative agreements. We distinguish it

from Model 2 by calling it ‘Open to Learning (OTL)’ and contrast it with less effective approaches which we call ‘Closed to Learning (CTL)’ rather than Model 1. The three governing variables which actors seek to satisfy are those of Model 2: respect for self and other; valid information and internal commitment. There are no specific behaviors which *ensure* their embodiment, for there is no one-to-one correspondence between speech behaviors and underlying values (Rice & Burbules, 2010; Wortham, 2010). Nevertheless, the design of an intervention and of associated measures requires, as far as possible, specifying features of behavior which are more likely to be congruent with such governing variables. Two of the three action strategies we include in OTL- advocacy and inquiry- are based on Model 2. The third, problem-solving, is based on the negotiation literature.

In its simplest terms, advocacy involves communication of one’s own views. Advocacy that is congruent with respect, valid information and internal commitment is communicated clearly, honestly and without assuming its truth, for such assumptions foreclose rather than invite difference and disagreement. By providing the grounds for claims, particularly those that are contested, both parties can check the validity of assumptions about the nature, cause, or possible resolution of a problem or conflict situation. The type of advocacy required is compatible with holding firm convictions but not fixed ones, for fixed views violate the value of seeking valid information (Spiegel, 2012). In contrast with such OTL advocacy, automatic restatement or elaboration of one’s own point-of-view, unilateral declaration of the merits of one’s own position, increased persuasion and leading questions, are indicators of CTL advocacy.

Inquiry that is consistent with OTL is genuine rather than manipulative or loaded (Le Fevre, Robinson, & Sinnema, in press). Under OTL, difference triggers curiosity rather than persuasion. Curiosity leads to respectful probing of the other’s thinking followed by discussion of the validity, implications, and possible integration of each party’s views.

Epistemic curiosity signals deep respect for the other person's ideas and concerns, reduces the vulnerability of the other person, and builds an affiliation between the parties (Tjosvold, Morishima, & Belsheim, 1999). In CTL conversations, by contrast, much inquiry takes the form of asking loaded or manipulative questions which are motivated by a desire to win the other person over to one's own point-of-view (Le Fevre et al., in press).

Problem-solving, the third broad action strategy of OTL, involves a genuine search for common ground that enables decisions and resolutions that serve the interests of both parties. The conversation is jointly rather than unilaterally managed. The leader, no matter how well intentioned, does not make private decisions about how to manage the agenda, timing, location, or sequence of the conversation. Nor do leaders make unilateral and private decision about how to manage the other's emotions. The conversation proceeds as a dialogue between two points-of-view, the purpose of which is to test their relative validity and find common ground.

These three OTL action strategies are central to what we have called the engagement of difference—a stance which seeks to appreciate and learn from difference so agreement can be reached about whether there is a problem and, if so, how to resolve it.

### **Method**

In this section, we outline the methods used to address three research questions:

1. Prior to training, what level of interpersonal effectiveness do educational leaders demonstrate, and what outcomes do they achieve, in conversations which they describe as difficult?
2. To what extent does an intervention designed to increase leaders' interpersonal effectiveness in such conversations, improve leaders' strategies and the outcomes of such conversations?

3. How does the intervention influence leaders' ability to engage with rather than bypass difference and disagreement?

### **Context**

The research was embedded in a professional development program being run by the first and second authors for all the regional directors and assistant directors of education (referred to generically hereafter as directors) in one Australian state. The role of the director is very similar to that of school superintendent, except that directors are employed by, and accountable to, the state's Department of Education and Child Development rather than to a school board. Many of the 850 schools and 400 preschools in the state enroll a diverse mix of students from white, immigrant and aboriginal communities. Directors are assigned to one of the state's 12 regions where they have responsibility for the work of up to 30 pre-school, elementary, middle, and high school principals. Directors are involved in the appointment, re-appointment, and appraisal of these leaders (referred to generically hereafter as site leaders) and work with them to set and achieve school and leadership development goals. Directors are also responsible for handling parental complaints made to the state department about a school or its leader. They typically have significant leadership experience before taking up this role.

### **Research Design**

A concurrent mixed method triangulation design was used to address the three research questions (Creswell, Plano Clark, Gutmann, & Hanson, 2003). It is described as concurrent, because the qualitative and quantitative phases of the study were conducted in parallel rather than sequentially. Several quantitative measures were used to estimate intervention effects, including leaders' self-ratings of their interpersonal behaviors and conversation outcomes, before and after the intervention. The post-intervention self-ratings

were compared with independent ratings provided by the site leaders with whom the directors interacted.

While it would have been desirable to include a comparison group, or to have randomly allocated participants to a treatment and waiting list condition, this was not possible because the population of directors (34 state-wide) was too small to make such comparison possible. Maturation and experience threats to the internal validity of the study were mitigated by gaining information about the history of the problems that were the subject of the conversations, including their duration and the effectiveness of prior conversation attempts (Shadish, Cook, & Campbell, 2002). This information enabled evaluation of the claim that the passage of time rather than the intervention itself caused any shifts in directors' OTL behaviors or in the conversation outcomes.

The third research question about the influence of the intervention on directors' engagement of difference was addressed by comparison of a subsample of directors' pre- and post-intervention conversation transcripts. This qualitative analysis provided a rigorous cross-check of the quantitative findings by going beyond shifts in interpersonal behavior, to reveal more about whether or not any behavioral shifts were reflective of deeper shifts in director's theories of action.

### **Participants**

All 34 directors in the state were invited to participate in the professional development. This invitation had been preceded by a series of meetings between the researchers and directors' representatives to plan how the professional learning and research objectives could be met in one integrated and efficient program. Twenty-eight directors were able to take up the state department's invitation to participate in the training, and all 28 gave confidential written consent to be involved in the research. Twenty-two of the 28 completed

the three-day training with the attrition due to leave, transfers to other positions, and retirements.

Since much of the content of the training was based on real interpersonal problems experienced by the directors, consent was also sought from the relevant site leaders. These site leaders took no part in the professional development and were not informed about its specific content. The consent process, for both directors and site leaders, involved detailed explanation about how data would be managed (e.g., through use of confidential participant codes) so that it was not accessed without their consent by their employer.

Since some of our analyses required comparison of ratings made by directors and their chosen site leader, only those directors for whom we obtained these matching data were included in the sample we used to test for intervention effects. This left 18 (7 male and 11 female) directors' results available for analysis, most of whom had more than six years' experience as a principal and were in their first five years as regional director. The site leaders who were the focus of their conversation comprised one preschool leader, eight elementary school principals, one middle school leader, and eight high school principals.

### **Data Collection and Professional Development Program**

The professional development intervention, designed to teach the theory and practice of OTL conversations, was based on five design principles. These principles were based on theories of professional learning (Bransford, Brown, & Cocking, 2000) and on the nature of the content to be learned (OTL governing variables and action strategies). First, there was a strong focus on revealing and critiquing the theories of action that informed directors' current practice, because current understandings and experience shape response to new material (Bransford et al., 2000). Argyris's prior intervention research has shown that since these theories are likely to be Model 1, change requires unlearning the defensive routines associated with Model 1 in order to make the shift to Model 2 (Argyris, 1990; 1991). Second,

priority was given to generating and evaluating behavioral data because, without such data, the intervention would be focused on participants' espoused theories rather than their theories-in-use (Argyris & Schön, 1974). Third, the intervention design included multiple exposures to video and written examples of OTL conversations so participants could deepen their understanding of the normative standard being used to evaluate their practice and of the gap between it and their current practice (Kluger & DeNisi, 1996). Fourth, the intervention integrated metacognitive skills by teaching participants how to cue their own use of OTL and assess their own practice (Bransford et al., 2000). Fifth, transfer beyond the training was fostered by basing many of the activities on participants' real on-the job problems. These five design principles shaped the intervention activities that are outlined in the left-hand column of Table 1. The right-hand column lists the data collection activities that were integrated into the development program.

[Table 1 here]

Table 1

*The Sequence of Intervention Activities and Data Collection*

Pre-intervention activities	Data collection
<p><b>Workshop Day 1</b></p> <p>Overview of research and development program and ethics procedures</p> <p>Identifying five problems</p> <p>Baseline conversation for two selected problems</p>	<p><b>Online Survey 1</b></p> <p>Directors' description of five problems</p> <p>Directors' ratings of the characteristics of five problems</p> <p><b>Conversation recordings (two per director)</b></p> <p><b>Conversation reflection recordings (two per director)</b></p>
Intervention activities	
<p><b>Workshop Day 1 (continued)</b></p> <p>Presentation</p> <p>OTL article discussion—intellectual origins of OTL</p> <p>Video exemplar of OTL skills and values</p> <p>Practice exercises</p>	
[Three month interlude]	
<p><b>Workshop Day 2</b></p> <p>Learning to assess the quality of conversations</p> <p>OTLC Feedback and coaching – using example of annotated transcript from Workshop Day 1</p> <p>Reference to own transcript of baseline conversations (from Workshop Day 1)</p> <p>Trios—rotating roles of director/site leader/observer</p> <p>Fishbowl—conversation practice with public feedback</p>	<p><b>Online Survey 2</b></p> <p>Directors' rating of skills and outcomes for their first problem <i>baseline</i> conversation (referring to own transcript)</p> <p>Directors' rating of skills and outcomes for second problem <i>baseline</i> conversation (referring to own transcript)</p>
<p><b>Workshop Day 3</b></p> <p>Rehearsal conversation—videoed and immediately viewed with coaching and feedback</p>	<p><b>Online Survey 3</b></p> <p>Directors' rating of effectiveness of OTL training</p> <p>Directors' rating of importance of OTLC</p>
[Approximately four week interlude]	
Post-intervention activities	
<p><b>In own contexts</b></p> <p>Real conversations with site leaders involved in the two problems selected (in Workshop Day 1)</p> <p>Real conversations with site leaders involved in additional three problems where possible</p>	<p><b>Online Survey 4</b></p> <p>Directors' rating of skills and outcomes for their <i>real</i> conversations (for the two problems selected in Workshop Day 1)</p> <p><b>Survey 5</b></p> <p>Site leader's rating of skills and outcomes for the <i>real</i> conversation</p>

**Pre-intervention activities.** In order to ground the intervention in the on-the-job challenges of their work, each director was asked in On-line Survey 1 to identify five problems they experienced regarding the performance or behavior of someone whose work fell in their area of responsibility. They were advised to select problems that were important to them, that they found difficult and which they needed to address. The five problems nominated by the directors covered a range of concerns including the adequacy of strategic planning, instructional leadership, relationships with colleagues or the community, and conflict management. The paragraph they wrote about their perception of each problem provided clues about how they were framing the issue and about the extent of difference between the parties. For most problems, the directors described their site leaders as reluctant to make the changes that the directors believed necessary for improved school or leadership performance.

The majority of nominated problems were based in elementary schools (60%), with 25% in high, and 15% in early childhood centers. Data on duration were available for 80 of the 90 nominated problems, with directors reporting at the time of the workshop, that 42% of them had a duration of less than six months, 19 percent had persisted for between six months and one year, 21% for between one and two years and 17.5 percent for between two and four years.

From the five nominated problems, directors selected two to focus on in the workshop. Because intervention effects were tested in the real problem situation, directors were asked to choose the two problems involving site leaders whom they believed would consent to being involved in the research, including allowing the conversation to be recorded. Table 2 compares directors' ratings, on a 5-point Likert scale, of the two addressed problems with the non-addressed problems and shows that there are no significant differences between

them except on importance where, on average, directors have rated the two problems they addressed as significantly more important to resolve than their non-addressed problems. Directors perceived their addressed problems as very important to resolve, and their prior conversation attempts as somewhat difficult and minimally effective. They described themselves as moderately confident in their ability to resolve the problem and only slightly influential in their attempts to address the problem to date.

[Table 2 here]

Table 2

*Directors' Perceptions of their Nominated Problems*

	Addressed problems		Non-addressed problems		<i>n</i>	95% CI for Mean difference		<i>t</i>	<i>df</i>	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		Lower	Upper			
Importance of resolving the problem <sup>a</sup>	4.47	0.87	3.76	0.59	17	0.15	1.26	2.70	16	0.02
Difficulty of prior conversation attempts <sup>a</sup>	3.53	0.92	3.08	0.62	15	-0.05	0.95	1.92	14	0.08
Effectiveness of prior attempts at resolution <sup>b</sup>	2.20	0.68	2.65	0.62	15	-0.98	0.08	-1.84	14	0.09
Confidence in ability to resolve the problem <sup>a</sup>	3.12	0.78	3.33	0.48	17	-0.66	0.23	-1.02	16	0.32
Degree of influence in prior attempts at resolution <sup>a</sup>	2.47	0.92	2.57	0.63	15	-0.75	0.59	0.33	14	0.75

*Note.* For non-addressed problems, the mean and standard deviation are the mean ratings of up to four other problems.

<sup>a</sup> Response options for these items are: 1 = Not at all; 2 = Slightly; 3 = Somewhat; 4 = Very; 5 = Extremely.

<sup>b</sup> Response options for this item are 1 = Ineffective; 2 = Minimally effective; 3 = Satisfactorily effective; 4 = Highly effective; 5 = Extremely effective.

Baseline data on directors' interpersonal behaviors prior to the intervention were gathered by recording conversations about their two selected problems. Instructions were given about how to make the conversations as authentic as possible. Working in pairs, directors briefed their partners about the nature of the problem and about the likely reaction of the site leader. After each baseline conversation the directors reflected privately on what they thought had gone well, what was difficult, and why. Both the conversations and the directors' reflections were audio recorded and transcribed.

**Intervention activities.** The intervention began on Day 1 with a presentation about the importance of OTLC for instructional leadership, building relational trust, and problem-solving (Robinson, & Le Fevre, 2011). This was followed by discussion of an article which introduced participants to the intellectual origins of CTL/OTL conversations in Models 1 and 2 (Argyris, 1991). Next, a seven minute video of an OTL conversation was discussed with a focus on the extent to which the leader's behavior reflected OTL governing variables. The subsequent more formal presentation about OTL was broken up by short exercises which enabled directors to practice discrete behaviors, such as clearly and respectfully stating their concern, summarizing and checking their understanding of the other person, and directly inquiring into others' reactions to their views.

The second and third days of the intervention took place on consecutive days three months after the first workshop. In the interim, transcripts of the pre-intervention baseline conversations had been provided to participants, and analysis and feedback based on those conversation transcripts had been prepared.

**Learning to identify OTL and CTL practices.** The major focus of Days 2 and 3 was on teaching the directors how to assess and improve the quality of their own conversations. Using an annotated transcript, the first author modeled how to apply OTL/CTL theory to the analysis of a transcript. The annotations highlighted selected excerpts of the transcript that indicated OTL or CTL behaviors, provided alternative wordings where the excerpts were deemed inconsistent with OTL, and commented about the theoretical rationale for the alternative.

A second video was then presented that showed four segments highlighting common difficulties in learning OTLC—each segment comprised a pair of examples (one OTL and one CTL). The segments were discussed and directors used them to rehearse taking a more OTL approach to a conversation about the problems they had selected.

Each director then read the transcripts of their own baseline conversations (from Workshop Day 1) for their two selected problems and rated their use of OTL skills and the outcomes for each conversation (the rating scales from Online Survey 2 are described in the subsequent measures section).

**OTL practice, feedback, and coaching.** Directors spent approximately five hours over Days 2 and 3 focused on improving their conversations about their two selected problems. Three types of activity were used to provide coaching, feedback, and practice opportunities. The first activity involved conversation practice in trios in which participants rotated roles as director, site leader, and observer. Feedback on the directors' behaviors was provided by the first author and observers throughout this activity.

The second activity used a fishbowl technique where one trio held their conversation (in the fishbowl) for all of the other participants to view. After the conversation itself, the director who had nominated the problem was asked to disclose what they were thinking at critical times in the conversation, so that the relationship between their thoughts and actions could be discussed. The director was then coached until all members of the trio agreed that the conversation was more effective.

The third activity was a rehearsal conversation that was video recorded (up to 15-minutes) once again with a role-playing colleague. The videos were immediately reviewed individually with the first author giving feedback and coaching to the responsible director. The directors then revised their conversation plans in preparation for having the real conversation with the site leader.

**Post-intervention activities.** After the intervention, directors held a conversation with the actual site leaders involved in their two selected problems. Contingent on site leader consent, those conversations, which are referred to in Table 1 as 'real', were also recorded and transcribed. The directors, using Online Survey 4, and the site leaders, using paper survey

forms (Survey 5), independently rated the directors' behavior and the outcomes of their real conversation.

The directors were also asked to audio record a short private reflection about the conversation against the same criteria they used for their pre-intervention conversation. Directors were encouraged to address the remaining three of their five initial problems with the relevant site leaders. A report-back session with the directors was held one year after the start of the intervention to provide preliminary results to the participants.

### **Measures**

Both quantitative and qualitative measures were developed for the purpose of evaluating the effects of the intervention and investigating shifts in participants' response to actual or anticipated disagreement.

**OTL behaviors and conversation outcomes.** A 5-point effectiveness scale was developed to assess the extent to which directors used OTL in their baseline and real conversations. The scale comprised 16 items describing advocacy, inquiry and problem-solving behaviors that were consistent with the governing variables of OTL (Appendix A, Items 1-16). The advocacy items included such behaviors as open and respectful statements about one's concerns and clear explanation of the grounds for one's point of view. Indicators of inquiry that were consistent with OTL, included inquiry into the other's reasoning and inquiry into their doubts and disagreements. Indicators of problem solving included such items as explicitly checking assumptions about the problem's cause and possible solutions and inviting the other person's assistance in better understanding the situation.

A 9-item agreement scale was used to assess both task and relationship outcomes of the conversation (Appendix A: Items 17–25).

Since scale score reliability is a function of both the coherence of the items and the context in which a scale is used, we present information about the reliability of both sets of

scores in each of the contexts in which they were administered and information about the degree of coherence of their respective items. For the directors, Cronbach's alpha for the OTL behavior and outcomes scores in the baseline condition was .90 and .82 respectively and .89 and .83 for the OTL behavior and outcome scores in the real conversation. For the site leaders, Cronbach's alphas were .92 and .87 for behaviors and outcomes respectively. For directors, average item-total correlations were .57 and .53, for baseline skills and outcomes respectively; and .55, for both skills and outcomes on the real conversation. Site leader average item-total correlations were slightly higher at .66 for skills, and .61 for outcomes. These complementary findings indicate that the two sets of scale scores are a) reliable across time, b) reliable when used by different groups, and c) comprised of items to which the participants responded in a highly consistent manner.

### **Quantitative and Qualitative Analyses**

The significance of the intervention was analyzed through calculation of an effect size measure (Cohen's *d*) and through one-tailed *t* tests of mean differences between skills and outcomes for baseline and real conversations. The validity of directors' self-assessments was examined by a two-tailed comparison of their ratings with those of their site leader. In-depth qualitative transcript analysis was used to address the question of how the intervention had changed directors' perceptions of and response to difference. Since 18 pairs of transcripts were beyond the scope of this paper, the two directors with the highest self-ratings on OTL skills in their real conversation were selected for this analysis. This enabled us to check whether we agreed that they were as skilled in OTL conversations as they themselves believed, and to identify any shifts in their pattern of responses to difference before and after the intervention.

## Findings

The first research question about the effectiveness and outcomes of directors' baseline conversations is addressed, before turning to the second research question about intervention effects. The section concludes with findings relevant to the third research question about shifts in directors' ability to engage with rather than bypass anticipated or actual disagreement.

### Interpersonal Effectiveness in Baseline Conversations

Prior to the intervention, the directors' average OTL behavior score was 2 ( $M = 1.99$ ) on the 5-point scale, indicating they perceived themselves as only 'minimally effective' in these OTL behaviors (Table 3). Of the 16 OTL behaviors, directors, on the whole, saw themselves as more effective in advocacy of their own point of view (Appendix A: Items 2, 3 and 10) than in inquiry into others' viewpoints (Appendix A: Items 5, 6, 7 and 8.). They rated their effectiveness in some problem-solving behaviors (Appendix A: Items 13 and 14) as lower still, but rated themselves as more effective when it came to the making of cooperative statements (Items 1, 4 and 16). This pattern is consistent with that reported by the first author in a previously published study in which principals were scored by independent raters as being more OTL in their use of advocacy than inquiry strategies (Robinson & Le Fevre, 2011). As in this study, however, even the more highly rated advocacy skills fell short of exemplifying OTL behaviors.

The conversation outcomes (Table 3) associated with this pattern of interpersonal behavior were rated, on average, just over 2 ( $M = 2.33$ ). As higher ratings indicated greater agreement that the conversation had positive outcomes, this low rating indicates that the directors had a largely negative view of the outcome of their conversations. The highest three outcomes scores were all concerned with the quality of the relationship (Items 18, 19, and

20). The lowest scores were given to items describing the task-related outcomes (Items 24 and 25).

In summary, these self-ratings show that, prior to the intervention, directors evaluated their effectiveness in the use of OTL behaviors as low. Their baseline conversations had resulted in the same ineffective and unsatisfactory outcomes that they had previously reported in their written descriptions and ratings of each problem.

### **Interpersonal Effectiveness in Post-Intervention Real Conversations**

On average, directors rated themselves significantly higher on both OTL behaviors and conversation outcomes following the intervention than they did prior (Table 3).

Directors' interpersonal skills score increased to an average rating of between 'satisfactorily effective' and 'highly effective' ( $M = 3.43$ ) on the 5-point scale. The validity of these self-ratings is suggested by the fact that site leaders' independent ratings of directors' skills were significantly higher than directors' self-ratings (Table 4).

Three of the four biggest gains in self-reported OTL behaviors involved inquiry into the other person's point-of-view (Appendix A: Items 5, 6, 12, and 13). These shifts indicate the intervention was successful in increasing the directors' respectful inquiry into the thinking of the site leaders. After the intervention, the two items which most directly tested response to difference (Appendix A: Items 4 and 7) remained among the lowest rated, suggesting the relative difficulty of shifting these particular behaviors.

More effective OTL behaviors were associated with improved outcomes. Directors' outcomes ratings increased to approximately 4 on the 5-point scale ( $M = 3.98$ ), suggesting they agreed that their conversation achieved the positive relational and task outcomes described by the nine items (Table 3). Site leaders were even more positive than directors about the outcomes of the conversations they had experienced (Table 4). A comparison of the directors' own ratings across the baseline and real conversations shows that the greatest

improvements were made on indicators of integrative outcomes (Appendix A: Items 17, 22, and 25).

[Table 3 here]

Table 3

*Directors' Ratings of Conversation Skills and Outcomes*

Total	Intervention				<i>t</i> (17)	<i>p</i>	95% CI		Cohen's <i>d</i>
	Pre (Baseline)		Post (Real)				<i>LL</i>	<i>UL</i>	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>					
OLC Skills	1.99	0.55	3.43	0.40	10.66	<.001	1.16	1.73	2.51
OLC Outcomes	2.33	0.54	3.98	0.47	9.79	<.001	1.29	2.00	2.31

*Note.* One-tailed *t* tests were used.

[Table 4 here]

Table 4

*Comparison of Directors' and Site Leaders' Ratings of Real Conversation*

Total	Director		Site Leader		<i>t</i> (34)	<i>p</i>	95% CI Difference		Cohen's <i>d</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			<i>LL</i>	<i>UL</i>	
OLC Skills	3.43	0.40	3.90	0.58	2.82	.008	0.13	0.81	0.94
OLC Outcomes	3.98	0.47	4.36	0.42	2.53	.016	0.07	0.68	0.84

*Note.* Two-tailed *t* tests were used.

In summary, the intervention was associated with improvement in directors' use of OTL and in the outcomes of their conversations. The magnitude of the effect of the intervention, as indicated by Cohen's *d* values of 2.5 and 2.3, is considerably larger than typically reported in education research (Hattie, 2009), but is not atypical of effect sizes seen in intensive interventions with small samples (Slavin & Smith, 2009). It is unlikely that the improvement is attributable to the passage of time or to on-the-job learning, since the majority of the nominated problems had been ongoing for more than six months prior to the

study. In addition, the directors had rated the effectiveness of their prior attempts to address these problems as low, with 13 of 16 available responses (81%) indicating ineffective or minimally effective prior conversation attempts. These data, combined with the evidence about the prevalence of the CTL approach to interpersonal difference, suggest that improvement was unlikely without the specialist intervention provided.

### **Relationship between OTL Skills and Conversation Outcomes**

The theory of the intervention posited that improved OTL skills would lead to improved conversation outcomes. Although the study design precluded a strict test of a causal relationship, correlational analyses of directors' baseline conversation ratings revealed significant relationships between skills and outcomes ( $r = .70, p = .001$ ). The same pattern was evident for the directors' ratings of their real conversation, although the correlation was weaker ( $r = .53, p = .024$ ). The more skilled a director perceived themselves to be in the use of OTL, the more positively they rated the outcome of the conversation. Site leaders' ratings of directors' behaviors and conversation outcomes in the real conversation were also strongly correlated ( $r = .78, p < .001$ ).

### **Engaging and Bypassing Disagreement**

We turn now to the third research question about how the intervention influenced leaders' ability to engage with rather than bypass different points of view. This exploration is particularly important in the light of our finding that, even though the overall intervention effects were large, the relative effect of the training on direct measures of response to difference was smaller than for other aspects of OTL practice (Appendix A: Items 4 and 7).

As elaborated in the prior analysis section, the two cases selected for analysis were those with the highest self-ratings in OTL in the post-intervention real conversation. The purpose of the analysis was to deepen our understanding of the progress the directors had made in engaging rather than bypassing difference and, thus, of how the intervention could be

improved. While both cases demonstrate important shifts from CTL to OTL approaches to difference, close analysis also shows the areas in which the effectiveness of the intervention was more limited.

**Case 1: Partial engagement of difference.** When people disagree at the level of fundamental beliefs and assumptions, an OTL stance requires critical examination of what each party assumes to be true or desirable. Protection of fundamental beliefs from public testing limits leaders to single rather than double-loop learning (Argyris, 1976a). Our first case 1 (Director 13) illustrates the limitation of the intervention in promoting double-loop learning through public testing of deeply held assumptions. The learning still to be accomplished is revealed by detailed examination of D13's conversation with a kindergarten principal who, in her view, was not doing enough instructional leadership. In her written description of her concern, which had persisted for about two years, she indicated that although the principal perceived herself to be doing a good job, some of her staff had complained to people in the regional office about her lack of curriculum leadership. Teachers had not communicated this view to the principal because they feared possible repercussions. D13 described the kindergarten principal as having a strong focus on the well-being of staff and students.

***Pre-intervention conversation.*** In her baseline conversation, D13 began by reminding the kindergarten principal (played by Kerry) of the region's priorities to focus on the link between instructional leadership, improved pedagogy, and increased student achievement. She then expressed her concern as "not getting a sense of her as an instructional leader."

*Excerpt 1*

D13: ...No, from the feedback, the written feedback that I've given you, you would know the areas that I've wanted to follow up with you. And look, it might be because my questioning techniques are not right. It could be that I lack clarity of purpose when I, you know, in the conversations we've had, but I'm just not getting a clear sense of you as an instructional leader, and, or even the student achievement and how pedagogy has improved over the two years that we've been working together. So...

Kerry: You really just have to look around the center, [D13], I think you can see that when you're here. The kids are happy, they're engaged, the teachers are busy, we're just so busy, that's the thing.

The major assumption that D13 made throughout the conversation was that instructional leadership was desirable, and that Kerry was not doing enough of it. In the face of disagreement (“You really just have to look around...”) she did not check Kerry’s understanding of or agreement with, her advocacy of instructional leadership. Instead, she instructed Kerry, on five separate occasions, one of which is reproduced in Excerpt 2, to provide her with examples when she had acted as an instructional leader.

*Excerpt 2*

D13: ...And look I notice that they're happy and I know you've got a very strong focus on student and staff well-being, which is wonderful. But what I'd like to talk about is you as an instructional leader. Can you give me an example of how you have used some of your learning to improve what's happening in the site, in relation to curriculum and student learning?

An explanation of D13’s persistence is found in her post-conversation reflection. She thought that in the prior two years her questioning had lacked specificity:

I've attempted to address the problem before by questioning, by asking to, for her to have ready for me examples of work that has happened. I haven't been specific, as specific as I was just now in the interview [D 13: Reflection on baseline conversation].

D13 believed that by asking more specific questions she would finally be able to get a “sense of Kerry as an instructional leader.” While prompting self-evaluation is consistent with the values of respect and valid information, it is controlling and disrespectful to insist that the evaluation be made against criteria with which the other party disagrees and to make the disagreement un-discussable. Kerry's reservations about instructional leadership stemmed from her alternative theory of leadership—one that gave emphasis to student and staff well-being. Rather than engage with Kerry's alternative leadership theory and her beliefs about its compatibility with instructional leadership, D13 bypassed it altogether and positioned it as an obstacle to be overcome.

One could reasonably argue that D13's advocacy of instructional leadership represented a non-negotiable policy agenda, which, as a public servant, she had a duty to pursue. In hierarchical organizations, policy worlds, and in life generally, there are plenty of non-negotiable bottom-lines. Their existence does not render the values and skills of OTL conversations inapplicable. The value of respect for self and others requires leaders to disclose and promote their interests and obligations as well as those inquire into those of others. When leaders' theory-in-use is dominated by the value of winning, such discussion is framed as a loss of control and it this framing that produces bypass of, rather than engagement with, the theories that are the source of resistance to the leaders' position.

***Post-intervention conversation.*** In the real conversation with the kindergarten principal, D13 began by referencing regional priorities and advocating that those priorities, rather than the usual day-to-day management issues, become their meeting agenda.

*Excerpt 3*

D13: Thank you very much for coming in. I really appreciate your time. The reason I asked you to come in is because, as you know, as a region we've had a real focus on instructional leadership, and what that means around planning, coordinating evaluating teaching in the curriculum, participating in the PD with teachers, and what I'm not getting is a sense in my view of you as an instructional leader at your site. So I'm just wondering how you're feeling about what I just said.

Kindergarten Principal: I think that we probably need some clarification around 'instructional leadership', [Yeah] what you actually mean by that. Because my understanding of instructional leadership might be different [Yeah] to yours. So

D13: Yeah, and that's a very good point—thank you for that. So when we talk about it at our leaders' days, what [the facilitator] has focused on has been leaders leading the curriculum, leading the learning, making sure the resources are all in place and helping to bring about change in pedagogy and teaching.

Kindergarten Principal: Mm-mmm.

D13: Does that make sense?

Kindergarten Director: Yes, that makes sense, yeah.

D13: And when we meet, generally, what I've found is that our conversations focus on the nuts and bolts of running a site, particularly in your case where you've got two campuses, and I know you talk a lot about well-being and just the difficulty of operating across two sites. So what I really want to investigate with you today is the notion of you as an instructional leader.

The improvement in OTL skill that this extract illustrates is D13's direct request for the leader's reaction to her points-of-view, "So I'm just wondering how you're feeling about

what I just said?” and “Does that make sense?” At the behavioral level, pausing to seek these reactions is an indicator of greater openness to difference. At a more holistic level, however, we question whether in this context, these behaviors are reflective of a more fundamental shift in the controlling stance seen in the baseline conversation. D13 has gained agreement to a focus on the director’s instructional leadership and has clarified what that means. She has checked that the principal understands her perspective but has not inquired into the differences that she believes exist, namely, the greater emphasis that the principal places on holistic well-being and relationships. The director continues, as in the baseline conversation, by making several requests for examples of how the principal has acted as an instructional leader.

*Excerpt 4*

D13: ....Okay. So what's really important for me as your line manager to be really clear about, is how you lead change and how you help your teachers to improve and to grow as teachers. And I'm wondering if you can actually be a bit more specific around you as an instructional leader.

Kindergarten Principal: Okay. When I do performance management with the staff and I actually do it with the teachers and the early childhood workers, of the 12 staff I only have five that are permanent—the rest are on contract or TRTs. But I always do performance management with all of them, because we link it in with our site learning plan. Now currently our site learning plan is focused on music and well-being.

*[continues for another 11 lines about the integration of music and well-being]*

D13: So what I'm hearing you say or what I'm hearing you talk about is how you interact with your staff, and how the focus at the moment—one of your focus areas is music...

Kindergarten Principal: Mm-mmm.

D13: ... and you've made the links with literacy and numeracy.

Kindergarten Principal: Mm-mm.

D13: That you've talked about the curriculum skills that are required, about the workshops that you go to with your staff...

Kindergarten Principal: Mm-mm.

D13: ... the [music] workshops and how you support them to go to the workshops.

They were the key elements for me...

Kindergarten Director: Yes.

D13: ... from what you just said, yeah. What I'm noticing Kerry is that you use a lot of the 'we's' which is good...

Kindergarten Principal: Mm-mm.

D13: ... and as instructional leader, what I'm wanting to hear about is the 'I'.

Kindergarten Principal: Okay.

D13: So can you think about a time when you as an instructional leader brought about a change in someone's pedagogy, helped somebody to grow or develop, as an example. So change the 'we' to an 'I'.

The conversation feels like an accountability exercise, the purpose of which is to assess the compliance of the site leader with the region's priorities. The learning of each party is confined to the question of whether the kindergarten principal is acting as an instructional leader, rather than, in addition, learning whether the site leader wants to be an instructional leader and has the capability to do so, given her current leadership theory and practice. The latter questions can only be answered by interrogating the interaction of the policy agenda with the principal's theory-in-use. Such theory engagement reveals how the principal is making sense of the policy and how that sense-making impedes her enactment of instructional leadership (Spillane, 2000; Spillane, Reiser, & Reimer, 2002).

D13's reflections on her real conversation indicate that she was aware of the possible consequences of bypassing the leader's theory:

Possibly one of the things that wasn't surfaced as well as it could have been was the range of reasons or obstacles to Kerry's being an instructional leader—what she saw as the range of obstacles [D13: Reflection on real conversation].

D13's bypass strategy did not appear to have negative consequences for her relationship with the kindergarten principal who wrote the following, after completing her ratings of the skills D13 had used in their meeting:

[D13] asked the question clearly and articulately—she clarified my question about “Instructional Leadership.” The conversation flowed clearly and easily and [D13] redirected my statements by getting me to begin with “I statements.” This got me thinking and putting my “leadership hat” on. I will go home/back to work to do my homework.

It is possible that the bypass strategy did, however, limit D13’s effectiveness progressing the problem, because it provided her with little valid information about why the leader was not acting as she would wish. This may explain why at the end of the intervention program D13 reported little change in this two-year-old problem.

SL [site leader] knows that educational leadership at her site will form part of our [evaluation] conversations as it does with all site leaders. She continues to describe what “we” did/do and describe how wonderful her staff is and how important leadership density is [D13: Notes on outcome of concern].

D13 had learned how to be more direct in stating her concern, to ask directly for others’ reactions, and to carefully check her summaries of the other’s point-of-view. While she could reflect after the fact about how she had bypassed the difference in their theories of leadership, she was not yet skilled enough in OTL to respectfully explore it on the spot. Until she could do so, her learning would be limited to the single-loop issues of how to ensure the principal was a more effective instructional leader, and the double-loop issues about the extent to which such leadership was either desirable or possible in this context would be bypassed.

**Case 2: Constructing conflict.** In the previous case there were substantive differences between the parties and our focus was on the extent to which the director’s interpersonal behavior reflected a more open or closed to learning approach to those

differences. In this second case, we show how a CTL theory-in-use can construct conflict, even when there is no substantive difference between the parties.

In the six months that D30 had been a regional director, he had made two visits and had one additional conversation with the secondary principal involved in this case. While he believed the principal had done a good job in turning around some very poor achievement, the latest results of the standardized federal assessments in reading, especially in Years 8 and 9, were a cause for concern. More important than the results themselves, however, were the attitudes that D30 attributed to the principal. D30 recalled that the principal had indicated in front of colleagues that he did not believe his staff (particularly the inexperienced ones), were capable of improving the literacy skills of his students. As expressed in his initial statement of concern, he saw the principal as “refusing to acknowledge the problematic student achievement data [and] dismissing the issue with [the] view that his teachers, (particularly younger teachers), are incapable of teaching fundamental literacy and numeracy skills.” After his baseline conversation he elaborated further:

And the principal really doesn't acknowledge it, the issue. And what he does, is he kind of, if there is some sort of acknowledgement he'll, he dismiss his school's ability to do anything about it, based on the fact that his teachers are incapable of teaching fundamental literacy and numeracy skills... Yes I have had, tried to have a conversation about the problem. It is a little bit difficult to have a conversation with this particular principal, because to an extent he sees himself as an academic, he's doing his PhD. He has some pretty fixed views. He tends to want to prove that what, the way he's going about things is the right way to go about things. And other possibilities that are floated, he tends to want to sort of refute them and defend the way that he operates and his school operates [D30: Reflection on baseline conversation].

In summary, D30 perceived the principal as not acknowledging the reading problem, as believing his staff were not capable of teaching the requisite literacy skills and as defensive about changing his current approach and fixed views.

The transcript of D30’s real conversation is replete with evidence that directly contradicts these perceptions. Some of that evidence is entered in the right-hand column of Table 5. The only evidence in the whole transcript that could be construed as supportive of the validity of D30’s beliefs about the principal is entered in the final column.

[Table 5 here]

Table 5

*Comparison Between D30’s Attributions about the Principal and the Principal’s Actual Speech*

D30’s pre-intervention attributions about principal	Disconfirming evidence in real conversation transcript	Ambiguous evidence in transcript
Principal does not acknowledge the reading problem	We know the [reading] problem exists, [Yeah] and we’re not sure whether the stuff that we are doing there is actually having any [Sure, yeah] impact, because we haven’t got that [Okay] baseline data.	
Principal is defensive—he wants to prove he and his school are doing things the right way	We’ve spoken to staff at length about literacy and where we wanna go with that [Mm-mm] and the question has always been, “How do we actually go about that?” And certainly in my capacity as a leader, I would be the first to say, [Mm] I don’t have that explicit knowledge either.	
Principal dismisses the school’s ability to do anything about it	<p>...and we’re certainly searching for, at the moment working with Janice to try and get us some baseline data at least to start working with...</p> <p>Certainly my staff have the capacity to do that if they knew exactly what it is that they have to do. [Yeah yeah] I think there’s a great need for our staff, and myself included in that, to have somebody come down for a day with us...to really highlight to us how we can subtly change our pedagogy, to make that significant improvement in the reading.</p>	But we are getting certainly new staff coming out as graduates [who] have literally no idea. In fact, it is a concern to me at the literacy level of some of those new [Yeah sure sure okay]...

In his reflection on this conversation, D30 commented that “it went actually better than I expected” presumably because he had expected conflict and, instead, had learned that his expectation had been based on a considerable misunderstanding of the principal’s views. He added:

Throughout the conversation I actually changed my view in terms of what I thought [the principal] was thinking... I think, I came to understand that [while] he thought that his staff were really quite skilled in their own particular subject specialization—in fact they were nowhere near as skilled in actually teaching the reading and literacy within, right across the curriculum. The extent to which he believed it was a problem, I actually learnt then also that it was about not knowing how to go about the teaching of literacy rather than having the ability to actually do that... I actually thought he was going to be a harder person to have a conversation with than he was, but it was good that we were able to move forward. We were able to come to some points of agreement in terms of ways forward, some of which he had already put into place anyway ... [D30: Reflection on real conversation].

While D30 acknowledges in these reflections that his three attributions about the principal listed in Table 5 were incorrect, he did not reflect on their origins. How could a skilled and well-intentioned director attribute such incorrect views? It is simplistic to say that he has not been listening, for one needs to ask what has stopped him from listening. What are the cognitive processes at play? Once again, there are some clues in D30’s reflections. He was committed to helping the school improve its reading results and in order to be effective he needed the active assistance of a principal who believed that improvement was possible. When he heard the principal make negative comments about the literacy and pedagogical capability of some of his staff, he assumed that this principal was implying that they could not improve:

I've raised the issue of if, that if we don't believe that teachers can improve their teaching and we don't believe that kids can improve their learning, then that's fundamental to the fact that they won't [D30: Reflection on baseline conversation].

D30 had interpreted the principal's negative comments about his teachers' current capability, as implying that he also believed that they could not change their practice. The problem is not D30's faulty inference, for such misunderstandings are common-place—it is his failure to check the validity of his inference and his subsequent construction around it of a powerful but false theory about the principal. This is a classic case of confirmation bias—he selects the information that confirms rather than disconfirms his preexisting schema about the principal (Gilovich & Griffin, 2010).

In the real conversation, D30 publicly disclosed his concerns and learned that he had both misunderstood the principal views and made incorrect attributions about his attitude to change. In Excerpt 5, D30 learned that the principal's concerns about his teachers were focused on literacy teaching and not on their more general capacity to deliver the teaching program.

*Excerpt 5*

D30: ...I know we spoke briefly at the regional data day regarding a statement that you made, and I guess I have a concern about your statement that you made about you not believing that maybe your teachers, particularly those early career teachers, have the capacity to deliver the teaching and learning programs, and therefore deliver the results that you want and we want as a region for the kids. I'd just like you to expand on that a little bit, just to understand a bit more about what your thinking is around that.

Principal: I think certainly from my perspective, and I'm not just highlighting newer staff—it's in terms of more of the literacy and explicit teaching of the literacy [Yeah] requirements of our kids. ...Certainly my staff have the capacity to do that [Mm-mm] if they knew exactly what it is that they have to do. [Yeah yeah] I think there's a great need for our staff, and myself included in that, to have somebody come down for a day with us...

D30 then summarizes his new understanding and how it differs from his previous misunderstanding.

D30: Okay. What I actually hear you saying [principal] is different to what I probably believed following your comment at regional office over there. I reckon you do actually deep down have a belief that the teachers can do a better job, it's just that the way we've worked with them and to identify the particular areas that they need to work on with the kids in terms of really positive ways forward in terms of what does actually work...

Principal: Look, I'd agree with that [D30] in the sense that my comment was I guess, there is this expectation that we're gonna improve our [Yeah] reading and writing [Yeah], but the staff who are a highly capable staff, [Yeah] were not sure how to do that. [Sure, sure] And I think we're making steps forward to actually...

The honesty of the principal in disclosing his own and his teachers' limited expertise in specialist literacy teaching, and the honesty of D30 in disclosing his misunderstandings, enabled the conversation to move into a new phase of collaborative planning for improvement.

In his reflections, D30 commented that he was surprised to learn the nature of the principal's real views. While one can understand the subjective sense of surprise, the director's new learning is the result of new behaviors which enabled him to interrupt his judgmental and CTL thinking about the principal. In summary, he had learned to disclose his own attributions in a manner that was honest but respectful, to invite feedback about their accuracy, to inquire into the views of which he had been critical, and to summarize and check the accuracy of what he was told. That was sufficient for him to greatly increase the validity of his understanding of the principal, and to shift into a more collaborative type of problem-solving. At the end of the intervention, D30 wrote that:

The concern was resolved in the short term to the extent that I better understood the views of the principal and the issue from his point-of-view, which were different to what I first thought and had described [in my original statement]. We were able to more openly discuss options in moving forward and the actions he may take in this as well as the role I could play along with other regional office leaders to support the school. This began to happen last year, but the principal has moved on to another position this year.

While D30 was possibly the most extreme example of mistaken assumptions, it was by no means a unique case. Of the 26 reflections on their real conversations that directors supplied, seven of them made unsolicited comments about the unexpected or surprising nature of these conversations. In three cases (D5; D7; D30) the mistaken assumptions related to the task issues. In the other four cases (D11; D20; D24; D29) the comments reflected surprise about the process of the conversations, or about the attitude of the leader. In all cases, the conversation had been “easier” or “more positive” than anticipated, or the principal had been more open and collaborative than expected. The shift in directors’ interpersonal effectiveness had enabled them to test rather than assume the extent of disagreement between them, and to find more common ground than they had expected. Many of the directors also commented on how, by being more open about their own concerns and more respectful of the views of others, they had developed a more trusting relationship.

### **Discussion**

Addressing problems of performance is a key responsibility of educational leaders, and a particularly difficult one when those involved hold differing perceptions about the nature of the problem, its causes and possible solutions. This study used a theory of interpersonal effectiveness, largely based on the work of Argyris and Schön (1974; 1996), to describe and improve the strategies leaders used in such situations.

The descriptive data gathered prior to the intervention showed that our sample of senior educational leaders were, on average, more effective in advocating their own views than in inquiring into those of others, and least effective in engaging in those behaviors described in the negotiation literature as problem-solving (De Dreu et al., 2007). The latter includes the ability to publicly check key assumptions about the nature of the problem and how to solve it.

One obvious question is how far these patterns of interaction can be generalized from a small sample of Australian leaders to wider populations. In our view, the descriptive evidence provided by Argyris (1982), the subsequent studies of leaders' behavior in contexts of appraisal, negative feedback, and accountability; and our own earlier research on the interpersonal effectiveness of principals suggest the prevalence of these CTL or Model 1 patterns of interaction (Bridges, 1986; James & Vince, 2001; Klimoski & Inks, 1990; Robinson & Le Fevre, 2011).

Our second research question asked about the power of a three day intervention to improve leaders' effectiveness in the resolution of their on-the-job performance problems. The directors' own ratings and the independent ratings of those they conversed with, suggested the intervention improved their ability to advocate their views in more open-minded ways. There were also significant shifts in their ability to inquire deeply into others' views and to seek feedback about their own views. Directors' increased effectiveness in OTL behaviors was associated with more positive relationships and more progress in problem-solving. Our findings about the improvement in outcomes are important because many of the problems addressed by the directors were longstanding and ones they had been unable to address effectively prior to the intervention.

Several cautions are needed in interpreting these intervention effects, however, due to limitations in our research design. One could argue that the absence of a comparison group

means that the improvement cannot be attributed to the intervention (Shadish et al., 2002).

While the limitations of the design must be acknowledged, the duration of many of the problems, along with participants' reports of their prior ineffectiveness in tackling them, suggests that it is unlikely that the improvement would have occurred without the specialist intervention. Further intervention research is needed, however, which uses a stronger comparison or control group design to provide a stronger test of the intervention effects.

A second possible limitation of our design was the use of a colleague to play the site leader in the baseline conversation and the use of the real site leader in the post-intervention situation. This shift, made necessary by the difficulty of getting access to site leaders on more than one occasion, raises questions about whether improved OTL behavior was due to different participants rather than to the intervention itself. While a definitive answer requires further research, there are some relevant indications in our study and in the literature. First, the colleague who acted the part of the site leader was briefed about how to play the role and that briefing included specific instructions about the behaviors of the site leader which the director had found difficult. Replication of relevant conditions in a simulation situation increases the consistency of behavior across simulation and real contexts (Weller et al., 2013). Second, many directors spontaneously commented in their reflection on their baseline conversation on the authenticity of their colleague's portrayal of the site leader. These features strengthen the argument that directors' behavior in the baseline conversation was representative of the approach they would have used with the real site leaders. Third, strong expectations about the interaction and strong emotional reactions were more likely to be activated in the real conversation, where more was at stake, than in the more artificial baseline conversation (Reis, Collins, & Berscheid, 2000). These expectations and emotions would make the real conversation harder than the less emotional baseline context and thus would reduce the chance of showing an intervention effect. In summary, the difference in the

people involved in the pre- and post-intervention conversations is unlikely to provide a compelling explanation of the intervention effect.

The third research question focused on the effect of the intervention on leaders' ability to engage with rather than bypass differing points of view. This question provides a tough test of the intervention for it requires leaders to be able to pursue valid information by treating competing views, not as resistance or as obstacles to be overcome, but as opportunities to learn about the quality of their own thinking and problem-solving.

Qualitative analyses confirmed that the directors in the two selected cases increased their ability to engage rather than bypass difference by inquiring into the other's point-of-view, checking their understandings, and asking for reactions. At the same time, Case 1 in particular, showed that these behavioral changes did not guarantee that the directors could be open to learning about those assumptions that were deeply implicated in their own belief systems and in the policy mandates they carried. In short, while some important behavioral shifts had been made and these shifts were associated with improved conversation outcomes, there remained question about whether the directors had sufficiently internalized OTL, especially its focus on valid information.

Adopting the behaviors of OTL without internalizing its governing variables prevents leaders from double-loop learning and it is this type of learning that promotes integrative agreements when parties bring different taken-for-granted assumptions to the table (De Dreu, 2010; Argyris, 1976a). When senior educational leaders can advocate for a policy, like stronger instructional leadership, while remaining open to local objections to its implementation, they are likely to learn more about the implications of their policy, provide better implementation support and promote policy learning (Honig, 2006; Leicester, 2007).

In future intervention research, we will be putting more emphasis on teaching leaders how to interrupt and publicly test the taken for granted assumptions they make about

performance problems. The previously discussed research on accuracy motivation provides some clues about the conditions under which such motivation is enhanced (Hart et al., 2009). One such condition is making the utility of accuracy highly salient by linking the accuracy of assumptions to leaders' problem-solving goals (Hart et al., 2009).

Further research is also needed about how to identify those assumptions whose validity is essential to the quality of problem-solving and how to assess the extent to which they are disclosed and publicly tested. This could involve studies of leaders' cognitions, through methods such as the left hand column or think aloud protocols, which enable detection of undisclosed and untested assumptions (Argyris & Schön, 1974). Studies are also needed in which the trajectory of problem-solving (Evers, 2007) is pursued beyond the initial conversation to the follow up conversations and the outcomes of those conversations in terms of resolution of the focus problems. Does training in OTL not only improve conversations and relationships but also resolve previously unresolved educational problems?

One lesson that emerges from this study for professional development is that important shifts in leaders' ability to address performance problems can be made after three days of training that includes rich opportunities to practice and gain feedback on their interpersonal behavior. Given the centrality of relationships to the work of school leaders, inclusion of such training within leadership preparation and development programs would be a good investment. It is critical that such training focus on leaders' theories-in-use, including both their behavior and the reasoning that explains it. Development opportunities that only focus on leaders' espousals will not change their interpersonal practice, nor enable them to inquire into their own possible contribution to the problems they seek to resolve (Schön, 1991).

While this study focused on leaders' effectiveness in the face of disagreement, the values and skills of OTL are relevant to all leadership interactions. Respect is a critical

determinant of trust and needs to be embedded in every interaction (Bryk & Schneider, 2002), as does the open-mindedness that is central to detecting and correcting mistaken assumptions about the nature, explanation and resolution of problems. Interpersonal disagreement was the focus of our study because such conversations provide tough tests of a leaders' ability to enact what they espouse.

It is worth noting that improved conversation outcomes were achieved without training the other party. Prior to training, many directors believed OTL would not be effective unless the other person was also exposed to the material. As they became more skilled in OTL, directors learned that their own increased openness reduced the defensiveness and resistance of the other party.

Seven of 18 directors who provided reflections on their real conversations commented on how their perception of difference and disagreement had been exaggerated. These findings raise important questions about the interaction between leaders' theories-in-use and the emergence and persistence of "resistance" and conflict. Leaders who are entrenched in CTL theories-in-use can create disagreement where none exists, and then explain the alleged disagreement by a series of untested attributions about the defensiveness or resistance of the other person. While many differences are real enough, this intervention showed that their duration, seriousness, and resolution may be as much a function of the leaders' interpersonal skill as of any substantive difference between the parties.

We know that many leaders are challenged by such people problems as concerns about teacher performance or attitude and parental complaints (Sinnema, Robinson, Le Fevre & Pope, 2013). When leaders can bring to such situations the respect and open-mindedness that they typically espouse, they may be able to forge quicker, more integrative and more sustained resolutions of such problems. Open to learning provides an intervention strategy for helping them to do so.

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**Appendix A: Directors' Mean Self-Ratings of Skills and Outcomes Prior to  
and Following Intervention**

Skills	Intervention				<i>t</i> (17)	<i>p</i>	95% CI		Cohen's <i>d</i>
	Pre (Baseline)		Post (Real)				<i>LL</i>	<i>UL</i>	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>					
1. I explicitly invited the other person to help me better understand the situation	2.28	1.07	3.33	0.59	3.70	.002	0.45	1.66	0.87
2. I openly and respectfully stated my real concern	2.50	1.04	3.72	0.46	4.65	<.001	0.67	1.78	1.10
3. I clearly explained the grounds for my point of view	2.50	0.92	3.33	0.69	3.07	.007	0.26	1.41	0.72
4. I indicated the possibility of differing points of view	2.17	0.92	3.06	0.73	2.68	.016	0.19	1.59	0.63
5. I inquired into the reasons for the other person's point of view	1.83	0.86	3.50	0.62	9.22	<.001	1.29	2.05	2.17
6. I checked that I had accurately understood the other person's point of view by using integrative summaries	1.44	0.62	3.61	0.70	11.70	<.001	1.78	2.56	2.75
7. I explored the other's doubts and disagreements	1.83	0.79	3.28	0.89	6.65	<.001	0.99	1.90	1.57
8. I ensured we sought to understand the cause of the concern before trying to solve it	1.83	0.92	3.06	0.54	4.65	<.001	0.67	1.78	1.11
9. I detected and checked assumptions about the cause of the concern	1.61	0.70	3.39	0.61	8.00	<.001	1.31	2.25	1.88
10. I suggested next steps that met the interests of both parties	2.06	0.80	3.44	0.98	4.74	<.001	0.77	2.01	1.11
11. I was responsive to the other's feelings	2.67	0.91	3.78	0.65	5.24	<.001	0.66	1.56	1.23
12. I directly sought the other's reaction to my point of view	1.94	0.94	3.89	0.47	9.45	<.001	1.51	2.38	2.23
13. I explicitly checked whether or not the other person shared my concern	1.67	0.84	3.44	0.62	9.33	<.001	1.38	2.18	2.19
14. I detected and checked assumptions about how to resolve the concern	1.61	0.70	3.28	0.57	7.29	<.001	1.18	2.15	1.72
15. I treated suggested causes and proposed solutions as hypotheses to be tested.	1.83	0.79	3.11	0.68	7.21	<.001	0.90	1.65	1.69
16. I explicitly sought areas of agreement	2.06	0.94	3.72	0.57	7.79	<.001	1.22	2.12	1.83

Outcomes	Intervention				<i>t</i> (17)	<i>p</i>	95% CI		Cohen's <i>d</i>
	Pre (Baseline)		Post (Real)				<i>LL</i>	<i>UL</i>	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>					
17. The two parties were really working in partnership	2.44	1.15	4.00	0.59	4.93	<.001	0.89	2.22	2.66
18. The conversation built trust between the parties	2.67	0.91	4.00	0.69	5.50	<.001	0.82	1.85	1.29
19. The conversation increased mutual understanding	2.50	0.79	4.06	0.80	5.74	<.001	0.98	2.13	1.36
20. The conversation damaged rather than enhanced the relationship - reverse scored	3.39	0.78	4.78	0.43	6.43	<.001	0.93	1.84	1.51
21. The problem was thoroughly explored	2.06	0.87	3.72	0.83	6.22	<.001	1.10	2.23	1.46
22. The legitimate interests of each party were given equal weight	2.11	0.76	4.00	0.34	10.57	<.001	1.51	2.27	2.49
23. A high level of agreement was reached about what to do next	2.06	0.87	3.72	0.96	6.52	<.001	1.13	2.21	1.53
24. Considerable progress was made in solving the problem	1.94	0.73	3.61	0.85	5.51	<.001	1.03	2.30	1.30
25. The outcome of the conversation is satisfactory to both parties	1.83	0.71	3.94	0.73	7.91	<.001	1.55	2.67	1.85