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ABSTRACT

This follow-up study examined the goals, roles, and functions of the Toronto Board of Education's local school teams (LSTs), which are designed to support teachers in providing appropriate interventions for students in need of assistance in regular and special education settings. The 1990 and 1995 study used similar questionnaires and methodologies, with the addition of a section on LST recommendations on the 1995 questionnaire. The follow-up study surveyed 341 individuals who were members of LSTs at 44 elementary and 11 secondary schools. The study found that the number of individual students referred to LSTs increased from a mean of 66 per school year in 1990 to a mean of 72 per school year in 1995. Consultation with parents was viewed as a highly important recommendation by both elementary and secondary LST members. (Three appendices provide discussion guidelines for planning an effective model, discussion guidelines for evaluating team effectiveness, and a copy of the questionnaire. Contains 21 references.) (MDM)

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**Local School Teams at the Toronto Board:
A Five-Year Follow-up Study**

October 1995

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Executive Summary

In 1990, a study of the Toronto Board's Local School Teams examined the goals, roles and functions of the teams in elementary and secondary schools. This 1995 study aimed to provide a benchmark on current LST functions. The 1995 questionnaire and study methodology were similar to those of the 1990 study, with the addition of a section on LST recommendations. Half of all schools were randomly selected from each of the three school administrative areas. In each selected school questionnaires were distributed to the LST chairperson, the guidance counsellor, the psychoeducational consultant, the social worker, special education teachers, secondary department heads, and four randomly selected teachers. Response rate was slightly higher than in the 1990 study.

Among highlights of the findings:

- In comparing 1990 and 1995 results, there are more similarities than differences. Many of the findings indicate that over the past five years, teams continued to focus on the same needs and the same model of service. This may be due, in part, to the fact that the first study documented that most members were satisfied with their teams as addressing the needs of referred students.
- LST members in 1995 tend to have a greater breadth of experience with LST consultation than in 1990 (with most of the 1995 respondents having 7 or more years of LST experience).
- Results continue to show a high degree of consensus regarding the role of teams in understanding and planning interventions for individual students at school and at home, and of providing consultation to educators.
- The number of individual students referred to the LST has increased, from a mean of 66 students per school year in 1990 to a mean of 72 students per school year in 1995.
- The characteristics of students referred to school teams continue to emphasize academic performance deficits (especially in language and study skills) and social-emotional needs.
- In both the 1990 and 1995 studies, although elementary and secondary students exhibited similar learning weaknesses, secondary students are more likely to be viewed as having emotional problems and psychological stressors. These findings may be seen as supportive of the literature emphasizing the importance of cost-effective early identification and prevention programs.
- Consultation with parents was viewed by both elementary and secondary respondents as a highly important recommendation (this recommendation in fact received the highest rating by respondents).
- Overall, analysis of recommendations documented that secondary Local School Teams were more likely to focus on school recommendations; elementary Local School Teams were more likely to focus on class recommendations.
- Immigrant and refugee student adjustment problems are often brought for school team consultation, reflecting the transformation of the Toronto Board student population. These students comprise heterogeneous groups whose language development and learning profile are linked to psychological, socio-cultural and educational factors.
- Respondents were asked to indicate their professional development preferences. The largest proportion of comments did not recommend topics, but rather noted concerns about effect of cutbacks

to Toronto School Board staff. However, suggestions for staff professional development are similar to those identified in 1990.

Among the suggestions and recommendations:

- In both 1990 and 1995 studies, two thirds or more of LST meeting time was allotted for discussion of individual students; one third of the time was devoted to discussion of broader issues concerning groups of students or the school as a whole. However, when the Toronto Board formalized Local School Teams nearly a decade ago, it reflected a mission which advocated the importance of broad based prevention programs. It may be a useful time to re-evaluate the mandate and goals of school teams.
- Given the complex problems related to acting out behaviors and victimization, an ecological approach to programming is called for. There is encouraging evidence that multi-disciplinary programs employed on a school-wide basis can be effective in reducing levels of anti-social behavior and improving the school climate.
- A continuum of individual and group interventions is needed in addressing the high proportion of referred students who were described by respondents as exhibiting depressive symptoms, or withdrawn behaviors.
- Given the proportion of immigrant and refugee students brought for team consultation, it may be useful to examine the recommendation documented in the study of Refugee Students in Toronto Schools (Yau, 1995), in utilizing the LST to "address and monitor the needs of individual and groups of refugee students on a regular basis in order to ensure immediate intervention and long-term prevention programs."
- School teams need to document which early recommendations were implemented successfully before considering out-of-class program changes.
- That fact that suggestions for staff professional development are similar to those identified in 1990 may indicate that despite follow-up inservice with individual schools or families of schools, these needs either remain, or have resumed five years later. System resources for staff release times and human resources in support staff have been reduced. Consequently, it is suggested that this type of inservice may be conducted on an in-school basis by school staff themselves, with the support of the education offices and the consultative staff.

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Multidisciplinary School Teams

*"From my experience, LST meetings are ... a very necessary support to our regular class programs."
(elementary school teacher)*

1.1 Introduction

Multidisciplinary School Teams are a vehicle for service delivery in many school boards in Canada and the United States. They have been in existence for over two decades and have assumed different names and functions based on systems' policies and school characteristics (Cole, Siegel and Yau, 1990). Overall, Teams are designed to support teachers in providing appropriate interventions for students in need of assistance in regular and special education settings. Some school boards have expanded Team mandates to include consultative services to educators, parents and community agencies (Davidson and Wiener, 1991; Cole, Siegel and Yau, 1992).

Schools have become recognised as intervention sites for numerous learning, social and emotional problems affecting children and adolescents (Cole, 1992). Because mental health problems tend to interfere with learning and socialisation, schools have come to rely on multidisciplinary supports to plan effective interventions at school and at home. Although some studies document that, to date, this service vehicle has not been as facilitative as it could potentially become, others have provided support for this service delivery model (Kaiser and Woodman, 1985; Huebner and Gould, 1991). Advocates of Multidisciplinary Teams often use the following reasons to support this model of service:

- a) Group problem solving considers a greater number of approaches to presenting problems;
- b) Participation often increases acceptance of recommendations made and promotes commitment to outcomes;
- c) School Teams can monitor the impact of suggested modifications and share follow-up information;
- d) Consultative support heightens staff morale and can create a positive climate for working with needy students and their families;
- e) School Teams encourage sharing of knowledge and resources and can lead to professional growth for all involved;
- f) Consultative Teams are cost-effective because they coordinate efforts of educators, support staff and parents; and
- g) Teams provide appropriate referrals for special education services, in-school counselling and community health and mental health supports.

1.2 Team Consultation

The composition of school Teams is closely tied to school policies and organisational goals. The roles of members and the functions of Teams vary. In the United States, for example, legislation requires that Multidisciplinary Teams provide for the assessment and programming of special education students. In Ontario, on the other hand, Teams are not mandated by special education legislation and are free to adopt a wide variety of roles.

In schools facing a rapid transformation of communities, Teams have focused on consultation and coordination of education and early intervention programs. (Cole, 1992; Elliott and Sheridan, 1992; Rosenfield, 1987). The consultative problem-solving that Teams develop may be described as including several phases:

- a) Clarification of presenting problem - a clear definition of the presenting problem is crucial for planning appropriate interventions. In order to avoid ambiguity, Team members must discuss and state the issues in concrete, explicit terms.
- b) Analysis of identified problem(s) - presenting students' problems should be assessed by eliciting information from multiple sources, including background information, review of school records and observational data. During Team meeting(s), teachers and Team members can clarify the needs of individuals or groups of students. Questions asked during discussion often lead to a better understanding of needs in the context of the current learning environment.
- c) Brainstorming alternative solutions - once the problem analysis has been completed, the Team should consider, together with invited members, as many solutions as possible. All alternatives should be discussed without making value judgements. By being open minded, all participants will feel that their ideas are listened to and respected.
- d) Developing plans for intervention - during this phase, Team members choose among alternative strategies. Short and long term action plans for class, school and/or community based supports are selected by consensus.
- e) Assigning responsibilities and time lines - once recommendations have been obtained by consensus, Team members have to assume responsibility for different aspects of the agreed upon solutions. In addition, time lines for program implementation have to be stated clearly. The questions Why? Who? What? When? Where? must be answered before the conclusion of the consultation meeting.
- f) Monitoring interventions and follow-up - follow-up meeting dates have to be established in advance in order to evaluate the effectiveness of interventions. This phase provides the Team with opportunities to review programs and receive feedback about services. By evaluating the effectiveness of programs, the Team can make additional recommendations or adjustments on an as-needed basis.

1.3 Effective Teams

Table 1 provides an organiser of Team characteristics discussed in the literature. Enhancing and inhibiting factors relate to clarity of goals; leadership support; effective planning; composition of membership and Team performance. Appendix A provides Local School Teams with discussion guidelines for planning and evaluation of Team effectiveness.

Table 1
Characteristics of Teams

Enhancing Factors	Inhibiting Factors
1. Goals and Roles	
<ul style="list-style-type: none"> * Goals and roles are clearly defined for Team members and for all school staff and invited members. * Professionals are appraised about the rationale for a particular service model. * Team members have a sense of ownership and are committed to multidisciplinary services. * Summary forms are developed by Team. 	<ul style="list-style-type: none"> * Team goals and member's roles are unclear to the professionals and the parents. * Different professionals are confused about the Team model: problem-solving Teams vs. a mandate for assessment and placement in special education. * Staff do not feel supported by their Team.
2. Leadership Support	
<ul style="list-style-type: none"> * Shared leadership or democratic leadership results in an inclusive atmosphere and following of guidelines. * Administrative support results in a larger number of consulting relationships which evolve among staff and parents * Release time for in-service training and teacher participation is provided. * Parents are invited to meetings. 	<ul style="list-style-type: none"> * Leaderless group results in inefficient decision-making and lack of focus for activities * Administrative lack of commitment to the Team results in uncertainty and mistrust. * Meetings are held infrequently and shared decision-making is not promoted. * Clarification of issues is not encouraged and implementation procedures are weak. * Parents are not encouraged to attend Team meetings.
3. Regular and Efficient Meetings	
<ul style="list-style-type: none"> * Frequent and scheduled meetings allow for a broad range of services. * Goals are discussed and agendas set by Team members. * Individual and group needs are addressed and multiple recommendations are considered. * Advance preparation time is given to staff. * Discussions are focused and needed documents are brought to meetings. 	<ul style="list-style-type: none"> * Infrequently held meetings result in crisis interventions and address only urgent matters. * Little time is allotted for discussion about group processes or issues of concern. * Meetings focus on individual students only. * Communication regarding Team dates and agendas are not shared ahead of time. * Discussions are rushed and problems unresolved.

4. Team Membership	
<ul style="list-style-type: none"> * Team membership varies according to the objectives it is trying to achieve. * Referring teacher is a key participant at all phases of consultation. * Translators are arranged in order to support family participation. 	<ul style="list-style-type: none"> * Core membership varies throughout the year because of poor planning. * Regular classroom teachers are not included in meetings. * Multilingual parents are not invited and/or translators not provided.
5. Team Performance	
<ul style="list-style-type: none"> * Effective Teams ensure democratic and equal participation in the consultation process. * Group dynamics are evaluated and members review their own role and those of other Team participants. * Proper in-service is provided in order to develop skills including: communication, prevention strategies, cross-cultural consultation and collaborative problem-solving. * All members are viewed as bringing different skills and knowledge to the Team. 	<ul style="list-style-type: none"> * Cross disciplinary exchange is not the norm and conflicts are unresolved. * Lack of proper in-service training leads to ineffective operations, resistance to change and poor utilisation of resources. * Meeting formats are unstable and consensual plans are not achieved. * Poor verbal and non-verbal communication results in a negative emotional reactions and lack of monitoring of recommendations. * Some Team members are not engaged as active participants and are less satisfied with the Team process.

1.4 Local School Teams at the Toronto Board

Local School Teams were formalised as a service delivery model in 1986 and were subsequently described as "the delivery arm of the system" (Toronto Board of Education, 1989). Teams are usually headed by the school principal or designate and are comprised of Student Support Services staff, special education teachers, guidance counsellors and invited members.

In 1990, a study on the goals, roles and functions of the Local School Team surveyed 50% of elementary and secondary schools (Cole, Siegel and Yau, 1990). Study findings documented that: a) most referred students were discussed on more than one occasion b) three quarters of meeting time was devoted to discussing individual students c) referred students were described as having academic problems, especially in language and study skills d) secondary school students tended to have more social and emotional problems e) overall, members indicated that their Teams usually achieve their goals f) classroom teachers felt somewhat less engaged as active participants in the meetings they attended (as invited members) g) the majority of Team members indicated that Teams were effective in meeting the needs of students. The rate of agreement, while still high, was significantly lower among classroom teachers and psychoeducational consultants.

Areas for improvement cited by respondents provided follow-up consultation and inservice on a school and family of schools basis. Professional development needs were related to: a) a focus on prevention and intervention strategies b) greater teacher involvement in decision-making, and c) planning follow-up activities for classrooms and schools. The 1995 study aims to provide a benchmark on current Local School Team functions and recommendations formulated during consultation.

Methodology

2.1 Instruments

Two questionnaires were sent out: one for LST chairpersons, and one for all other LST members. The two consisted of the same questions, but the chairperson was also asked a number of questions about LST administrative functions. Most sections of the questionnaire were replications of the 1990 LST questionnaire.¹ Two additional questions related to student characteristics were included. A new section on LST recommendations was also added; the goal of this section was to focus on team consultation and outcomes.

2.2 Procedure

As in the 1990 survey, 50% of Toronto's elementary and secondary schools with Local School Teams were selected from each of the three school administrative areas (53 elementary and 14 secondary schools). Each principal of the selected schools was sent the questionnaires. The principal distributed questionnaires to the LST chairperson, the guidance counsellor, the psychoeducational consultant, the social worker, special education teachers, department heads (at the secondary level only) and four randomly selected teachers. (For copies of the questionnaires and cover letters, see Appendix C).

Questionnaires were sent in March 1995; subjects were requested to return the questionnaire by the end of April. Each respondent was asked to return the questionnaire in the attached envelope to the school principal, who collected the material and returned them together to the Research Department in an enclosed self-addressed envelope.

2.3 Data Analysis

The analysis duplicated the procedures used in examining results of the 1990 study. Overall responses were described using simple frequencies, while cross-tabulation and chi-square analysis of results was used for comparing responses between different professional groups and between elementary and secondary school respondents.

Most questionnaire items were five scale points (e.g. "very seldom", "seldom", "sometimes", "often", and "very often") which for the analysis were collapsed into three scale points (e.g. "seldom", "sometimes", or "often").

Open-ended questions were coded using categories developed during analysis of the 1990 questionnaire, and adapted when necessary.

¹ However, sections on LST members' roles and functions which had been in the 1990 questionnaire were not included in the 1995 questionnaire.

Discussion of Results

3.1 Response Rates

In the 1995 study, 44 elementary schools (83% of the sample) and 11 secondary schools (78%) responded. Each sampled school returned several sets of multidisciplinary questionnaires, including those of school team members and classroom teachers. A total of 341 respondents completed and returned the questionnaires. The return rate is similar to that of the 1990 survey, which consisted of 332 respondents from approximately 54 schools. The proportion of Local School Team Chairpersons was higher in the 1995 survey (53 of 55 chairpersons in 1995 compared to 39 of 54 chairpersons in 1990).

The 341 respondents included staff from the following professional groups:

- Classroom Teachers	33% (112)
- Special Education Teachers	16% (56)
- Principals/Vice-Principals	15% (51)
- Social Workers	11% (39)
- Psychoeducational Consultants	9% (29)
- Department Heads	5% (16)
- Guidance Counsellors	4% (12)
- Other	6% (22)
- No information	1% (4)

As can be seen in Table 2, most of the participants had at least 5 years experience in LST's, while a quarter had 11 or more years of experience. As expected, participants in the current study have had more experience with school team consultation as compared with the participants in the 1990 survey. This in part can be explained by the fact that the Toronto Board formalized school teams in 1986, four years prior to the 1990 survey; thus, most schools would have had Local School Teams for at least a decade by the time of the current study².

Table 2: Years of Experience in LST's

Number of Years	Overall (N = 341)	Chairperson (n = 53)	Classroom Teacher (n = 112)	Others (n = 176)
2 or less	40 (12%)	4 (8%)	14 (13%)	22 (13%)
3-4	39 (11%)	6 (11%)	10 (9%)	23 (13%)
5-6	69 (20%)	13 (25%)	24 (21%)	32 (18%)
7-8	49 (14%)	10 (19%)	21 (19%)	18 (10%)
9-10	49 (14%)	11 (21%)	14 (13%)	24 (14%)
11 or more	85 (25%)	9 (17%)	23 (21%)	53 (30%)
missing data	10 (3%)		6 (5%)	4 (2%)

² For more details of the 1990 study, see Cole et. al., *The Local School Team: Goals, Roles, and Functions* (Research Services Report 194, September 1990).

3.2 School Team Chairpersons

Of the 44 elementary chairpersons who returned their questionnaires, 34 (77%) were school administrators (principals or vice principals), 6 (14%) were special education teachers, and 4 (9%) had other responsibilities. Out of the 9 secondary chairpersons who returned their questionnaires, three were guidance counsellors, three were department heads, and three were administrators. The high ratio of elementary chairpersons who were administrators, when compared to secondary chairpersons, was similar to the 1990 study.

3.3 Proportions of Time for Discussion of Various Issues

In both elementary and secondary LST's, according to chairpersons' information, on average, two thirds of meeting time was allotted for discussion of individual students' needs. Although this is somewhat lower than in the earlier study (an average of 68% in 1995 versus 76% in 1990), results indicate a similar pattern whereby the focus of Local School Team activities continues to center around individual students rather than groups of students, classes, or the school as a whole.³ Around a third of the time was devoted for discussion of broader issues (8% discussed classroom issues, 8% discussed groups of students, 8% discussed school issues, and 6% discussed team issues).

Table 3: Proportion of Time for Discussing Various Issues

ISSUES	Percentage of Time	Overall (LST's = 53)	Elementary (LST's = 44)	Secondary (LST's = 9)
Discussed Individual Students	< 40%	6 (11%)	6	0
	40-59%	11 (21%)	8	3
	60-75%	18 (34%)	16	2
	over 75%	18 (34%)	14	4
Discussed Classroom Issues	0%	14 (26%)	9	5
	1-9%	15 (28%)	14	1
	10-19%	20 (38%)	18	2
	20-33%	3 (6%)	2	1
	40%	1 (2%)	1	0
Discussed Team Issues	0%	14 (26%)	11	3
	1-9%	22 (42%)	18	4
	10-19%	14 (26%)	14	0
	20-25%	3 (6%)	1	2
Discussed Groups of Students	0%	17 (32%)	12	5
	1-9%	15 (28%)	12	3
	10-19%	13 (25%)	12	1
	20-33%	7 (13%)	7	0
	50%	1 (2%)	1	0
Discussed School Issues	0%	15 (28%)	13	2
	1-9%	20 (38%)	18	2
	10-19%	11 (21%)	10	1
	20-33%	6 (11%)	2	4
	75%	1 (2%)	1	0

³ At the same time, the change from 76% to 68% may indicate the beginnings of a shift towards discussion of broader issues; often long-term trends will take a decade or longer to clearly manifest themselves. It may be useful to monitor this pattern into the future.

3.4 School Team Goals

Eight school team goals were listed in the questionnaire. All respondents were asked to rate the personal importance they attributed to each goal. The percentages below indicate the proportions of the total respondents who rated each of the following goals as "very important" or "important".

The percentages below indicate the proportions of the total respondents who rated each of the following goals as "very important" or "important":

	1995 Study (N = 341)	1990 Study (N = 331)
- Understanding individual student needs and planning appropriate interventions in school, in the community and at home.	94%	89%
- Providing multidisciplinary consultation to school personnel re: the needs of individual students.	85%	82%
- Facilitating referrals for specialized services: (Educational, Psychological, Social Work).	85%	77%
- Co-ordinating specialized group work or other programs for students "at risk".	77%	73%
- Co-ordinating the work of team members.	74%	71%
- Identifying common student needs and placing schoolwide preventative programs and procedures.	74%	66%
- Monitoring referrals for Special Education placement.	71%	67%
- To monitor integration from Special Education.	53% ⁴	

Responses convey similar patterns to the 1990 study. The most important goals continue to address the needs of individual students and planning appropriate modifications and interventions for them.

There was a high degree of consensus among professional groups regarding the role of the team in addressing the needs of individual students. As in the 1990 study, a closer examination of the data indicates some discrepancies as to the degree of importance given the other team functions. Consistent with previous findings, over 70% of the principals rated all the stated goals as important, except for placement and monitoring of special education student's integration. Also consistent with previous findings, classroom teachers' and special education teachers' most highly rated goals continue to be understanding of individual student needs; facilitating referrals for

⁴ Added in the 1995 study.

specialized services; and monitoring referrals for Special Education placement.

Classroom and Special Education teachers placed a much higher priority on referral for Special Education placement (80% of classroom teachers, and 95% of special education teachers), compared to all other sampled groups. However, a lower priority was placed on monitoring integration of students from Special Education into the classroom (59% and 61% respectively). Data concerning monitoring integration from Special Education are more consistent with other professional groups (between 35% and 54% of other groups consider monitoring integration from Special Education to be important). This may indicate that a higher priority for team activity is placed on monitoring referrals for Special Education placement, as compared to consulting about the integration of Special Education students into regular classrooms.

There were some differences between social workers and psychoeducational consultants. As in the 1990 questionnaire, social workers were much more likely to agree that referrals for specialized services were important (85% of social workers versus 62% of psychoeducational consultants). In addition, social workers were more likely to agree that coordinating specialized group work for students at risk was important (82% of social workers to 66% of psychoeducational consultants) as was monitoring integration from Special Education (54% to 35%).

Table 4: LST Goals by Professional Groups⁵

LST GOALS	Principal/ (n = 51)	Classroom Teacher (n = 112)	Sp. Ed Teacher (n = 56)	Guidance Counsell- or (n = 12)	Psycho-ed Consult- ant (n = 29)	Social Worker (n = 39)	Dept Head (n = 16)
Understanding individual student needs and plan appropriate interventions	96%	85%	98%	100%	97%	100%	100%
Providing multidisciplinary consultation to school staff re: individual student needs	88%	71%	88%	92%	93%	100%	100%
Facilitating referrals for specialized services: (Educational, Psychological, Social Work)	71%	88%	96%	100%	62%	85%	100%
Co-ordinating specialized group work or other programs for students 'at risk'.	80%	72%	79%	92%	66%	82%	75%
Co-ordinating the work of team members.	71%	65%	80%	75%	83%	72%	94%
Identifying common student needs and placing schoolwide preventative programs/procedures.	80%	61%	71%	92%	83%	92%	75%
Monitoring referrals for Special Education placement	57%	80%	95%	67%	48%	56%	63%
To monitor integration from Special Education.	49%	59%	61%	58%	35%	54%	50%

⁵ Owing to the small sample size of guidance counsellors and department heads, one should be cautious about interpreting their group percentages.

3.5 Students Referred to LST's

3.51 Referral Rates

The number of students referred and discussed each year continues to vary from team to team. For elementary students, the mean number of students discussed increased from 62 in 1990 to 78 in 1995, with a range of 8 to 300 students. For the secondary panel, the mean number of students discussed dropped from 79 to 48, with a range of 8 to 75 students. (However, one should be cautious in interpreting difference in secondary panel responses, due to the small sample size.) Total average referrals increased from 66 in 1990 to 72 in 1995.⁶

The proportion of students discussed on more than one occasion dropped somewhat-- from over half in 1990 to 46% in 1995 (an average of 45% for the elementary and 48% for the secondary). As in previous study results, most of the students were not forwarded to either Local or Area IPRC. At the elementary and secondary level, on average, 30% were forwarded to either the Local or Area IPRC.

Table 5: Referral Rates

Number of Students	Overall (LST's = 53)	Elementary (LST's = 44)	Secondary (LST's = 9)
missing data	2 (4%)	2	0
under 20	2 (4%)	1	1
20-29	4 (8%)	4	0
30-39	5 (9%)	2	3
40-49	5 (9%)	4	1
50-59	8 (15%)	6	2
60-69	2 (4%)	2	0
70-79	6 (11%)	4	2
80-89	6 (11%)	6	0
90 or more	13 (25%)	13	0

Elementary range = 8- 300; secondary range = 8-75

3.52 Characteristics of Referred Students.

Altogether, 52 student characteristic items were listed in the 1995 questionnaire, as compared to 50 in the 1990 questionnaire⁷. The items related to a) academic performance; b) learning style and study skills; c) social skills; d) emotional problems; and e) psycho-social attributes. Respondents were asked to rate, on a scale of 1 to 5, how frequently students referred to teams had the characteristics mentioned. About half of the items were positive statements, and the other half were problem oriented statements. The respondents tended to rate 'seldom' for

⁶ The secondary range in 1990 was 30-200.

⁷ The additional characteristics were: "Acts violently", and "Refugee & Immigrant adjustment needs."

positive characteristics, but 'often' for items that were problem related. Overall, both academic related characteristics and social-emotional attributes are consistent with those documented in the earlier study.

Academic Performance.

Table 6 shows most students were referred for team discussion because their teachers saw them as having learning problems. Respondents were asked to rate referred students on academic performance in 8 areas: oral language, reading, spelling, written language, math, handwriting, general knowledge, and advanced/enriched programming. Consistent with ratings on school team goals, respondents focused on referrals of students with deficit skills rather than those in need of enrichment. For example, 65% responded that discussions about enriched programming 'seldom' occurred.

In general, perceptions of referred students academic profiles were similar by elementary and secondary staff. However, as noted in Table 6, significantly more secondary school respondents found their referred students to have problems in spelling and written language, and significantly less to have problems in math.

Table 6: Academic Performance

ACADEMIC PERFORMANCE AT OR ABOVE LEVEL	OVERALL (N = 341)			ELEMENTARY (n = 270)			SECONDARY (n = 71)		
	Often	Some- times	Seldom	Often	Some- times	Seldom	Often	Some- times	Seldom
Oral language is at or above level	26%	30%	42%	26%	32%	40%	30%	21%	48%
Reading is at or above level	5%	25%	67%	5%	22%	70%	7%	35%	56%
Spelling is at or above level	4%	20%	73%	3%	17%	76%	9%	30%	59% *
Written language is at or above level	4%	19%	74%	4%	16%	77%	7%	31%	59% *
Math is at or above level	11%	41%	43%	12%	45%	40%	9%	28%	55% *
Handwriting/printing is at or above level	6%	38%	51%	7%	38%	52%	4%	41%	48%
General knowledge is at or above level	19%	39%	39%	19%	42%	37%	21%	30%	47%
Requires advanced/enriched programming	10%	22%	65%	11%	26%	60%	6%	7%	82% *

* Statistically significant difference between elementary and secondary responses at $p < .05$

Active Learning and Study Skills

Table 7 documents eight active learning and study skill statements which were rated by participants. Results indicate that active learning attributes such as work completion, class participation, and enjoyment of academic challenges were seldom discussed. These findings are consistent with the academic performance characteristics which continue to document that school teams tend to focus their consultation on students who exhibit academic weaknesses, as compared with students who are in need of enrichment and expanded opportunities due to their academic strength.

Table 7: Active Learning and Study Skills

ACTIVE LEARNING AND STUDY SKILLS	OVERALL (N = 341)			ELEMENTARY (n = 270)			SECONDARY (n = 71)			
	Often	Some-times	Seldom	Often	Some-times	Seldom	Often	Some-times	Seldom	
Is task committed	7%	24%	66%	9%	25%	64%	1%	20%	73%	
Is motivated to learn	16%	41%	41%	18%	43%	37%	9%	34%	55%	*
Completes homework/project	5%	34%	58%	5%	37%	54%	3%	23%	72%	*
Prepares for quizzes, tests, exams	3%	25%	66%	3%	24%	66%	3%	28%	66%	
Participates actively in class	10%	44%	44%	11%	46%	40%	6%	34%	56%	*
Seeks help appropriately	7%	35%	56%	8%	38%	52%	0%	23%	73%	*
Likes academic challenges	4%	25%	67%	6%	24%	67%	0%	27%	69%	
Daily work is accurate, but has difficulty with tests or quizzes	14%	35%	47%	12%	32%	52%	21%	47%	28%	*

* Statistically significant difference between elementary and secondary responses at $p < .05$

Specific Learning Characteristics

As Table 8 illustrates, students brought for discussion to the team, were described as less likely to have academic strength. They were often described as more passive learners, who required assistance when new work was presented in class. They often forgot new routines and instructions. Elementary and secondary students exhibited similar learning weaknesses, and were viewed as dependent learners who worked best when watched or compelled.

Table 8: Specific Learning Characteristics

SPECIFIC LEARNING CHARACTERISTICS	OVERALL (N = 341)			ELEMENTARY (n = 270)			SECONDARY (n = 71)			
	Often	Some-times	Seldom	Often	Some-times	Seldom	Often	Some-times	Seldom	
Strengths										
Catches on to new ideas quickly	10%	28%	59%	10%	26%	61%	10%	32%	54%	
Is creative/has many interests	14%	31%	51%	13%	32%	52%	16%	31%	47%	
Can work in a co-operative group	14%	44%	39%	15%	41%	41%	11%	54%	31%	
Manages time appropriately	9%	21%	67%	9%	23%	65%	10%	14%	72%	
Work is adequately organized, tidy	5%	22%	70%	5%	23%	69%	3%	18%	73%	
On the whole attends well	14%	26%	57%	14%	26%	57%	14%	23%	59%	
Can tolerate frustration	3%	25%	68%	3%	26%	68%	4%	23%	70%	
Weaknesses										
Works at task only when watched or compelled	63%	24%	10%	66%	22%	10%	54%	31%	10%	
Needs extra explanations to understand new ideas	70%	19%	7%	74%	17%	7%	58%	28%	9%	
Is likely to forget instructions or routines	72%	18%	7%	75%	15%	7%	61%	27%	9%	*
Works too quickly, makes careless mistakes	42%	39%	16%	43%	38%	16%	38%	42%	14%	
Works steadily, but too slowly to finish in time allowed	27%	48%	22%	27%	47%	23%	27%	48%	20%	

* Statistically significant difference between elementary and secondary responses at $p < .05$

Social Skills

Most respondents did not describe their referred students as especially strong or weak in the social skills area. There was a tendency to identify positive social attributes less often and negative attributes more often, as in the 1990 study.

The students brought to the LST for consultation continued to be characterized as appreciating their teachers' attention. This is the only positive item in the entire list of student characteristics which was frequently attributed to referred students, who tend to be dependent learners. Withdrawn and quiet students were more often noted at the secondary school level. 87% of respondents in the secondary panel, as opposed to 75% in the elementary panel, described students as 'often' or 'sometimes' quiet and withdrawn. As well, 46% of secondary respondents and 59% of elementary respondents described students as 'often' or 'sometimes' exhibiting violent behaviors.

Table 9: Social Skills

SOCIAL SKILLS	OVERALL (N = 341)			ELEMENTARY (n = 270)			SECONDARY (n = 71)			
	Often	Sometimes	Seldom	Often	Sometimes	Seldom	Often	Sometimes	Seldom	
Positive Attributes										
Obeys school rules	17%	47%	33%	19%	44%	34%	9%	59%	30%	*
Appropriate social skills with teachers/peers	13%	41%	43%	16%	39%	43%	4%	48%	45%	*
Enjoys extra-curricular activities	31%	42%	23%	34%	41%	21%	17%	47%	31%	*
Appreciates attention from teachers	61%	23%	13%	63%	20%	14%	54%	34%	10%	
Negative Attributes										
Is frequently in arguments	40%	37%	21%	40%	36%	22%	37%	38%	21%	
Acts impulsively	56%	28%	14%	57%	27%	14%	51%	32%	14%	
Acts violently	27%	29%	42%	29%	30%	40%	21%	25%	49%	
Quiet, withdrawn	31%	47%	20%	29%	46%	23%	38%	49%	9%	*

* Statistically significant difference between elementary and secondary responses at $p < .05$

Emotional Problems

In describing students' emotional problems-- except for phobias-- approximately equal numbers of respondents indicated that emotional problems occurred 'seldom', 'sometimes' or 'often' among referred students. Team members were much more consistent in identifying phobias as an attribute that seldom characterized referred students. This is very similar to the 1990 study. These findings are also consistent with the low rate of prevalence of phobias in the population at large.

Significantly higher proportions of secondary school respondents characterized students as exhibiting depressive symptoms, and anxiety-related problems. Although overall phobias were not discussed very often, they were significantly higher among referred secondary students than elementary students.

Table 10: Emotional Problems

EMOTIONAL PROBLEMS	OVERALL (N = 341)			ELEMENTARY (n = 270)			SECONDARY (n = 71)			
	Often	Some- times	Seldom	Often	Some- times	Seldom	Often	Some- times	Seldom	
Is unhappy, depressed	36%	35%	27%	30%	37%	31%	59%	27%	13%	*
Has nervous habits	26%	33%	38%	24%	33%	41%	35%	32%	28%	
Is worried, anxious	40%	33%	24%	36%	33%	27%	58%	31%	10%	*
Has phobias	10%	21%	62%	7%	22%	65%	10%	21%	48%	*

* Statistically significant difference between elementary and secondary responses at $p < .05$

Psychosocial Stressors

For psychosocial stressors, the patterns observed in 1990 were nearly identical in 1995.⁸

- Students tended to have problems related to family stressors and school non-attendance, yet seldom had problems related to substance abuse, child abuse, and medical needs.
- A significantly higher proportion of secondary school respondents characterized their students as having all psychological stressors.
- A higher proportion of department heads (88%), pschoeducational consultants (82%) and social workers (79%) identified family stressors than did special education teachers (58%), principals/vice-principals (54%) and homeroom teachers (52%).

Table 11: Psychological Stressors

PSYCHOLOGICAL STRESSORS	OVERALL (N = 341)			ELEMENTARY (n = 270)			SECONDARY (n = 71)			
	Often	Some- times	Seldom	Often	Some- times	Seldom	Often	Some- times	Seldom	
Substance abuse	9%	14%	69%	6%	6%	78%	18%	41%	35%	*
Child abuse	11%	17%	66%	10%	13%	72%	14%	34%	41%	*
Medical needs	13%	22%	62%	12%	17%	69%	14%	42%	37%	*
Attendance issues	37%	25%	36%	28%	28%	42%	72%	14%	14%	*
Family stressors	61%	23%	14%	57%	25%	16%	76%	16%	6%	*

* Statistically significant difference between elementary and secondary responses at $p < .05$

⁸ Substance abuse appears to have increased in the 1995 survey, at the secondary level

ESL and Refugee Needs.

Respondents were asked to rate ESL needs and refugee needs as two characteristics. (In the 1990 survey, the item concerning refugee/immigrant students was not included.) As seen in Table 12, about a third of LST members saw ESL needs as an attribute that was often related to student referral, and about a quarter of LST members saw refugee needs as an attribute that was often related to student referral. One cannot tell from survey responses the extent to which ESL and refugee students may have student characteristics discussed earlier. However, other research (e.g. Yau, 1995), has indicated that refugees and immigrants share common difficulties in coping with a new language and culture. Refugees, in particular, "carry with them extraordinary social and emotional needs that make their overall adjustment complicated". Refugees made up 7% of the Toronto Board's elementary students and 13% of secondary students (Yau, 1995). ESL students make up 23% of the Boards' elementary students and 26% of secondary students. (Research Services, Demographic Profiles, 1995).

Table 12: ESL/Refugee Needs

ESL/REFUGEE NEEDS	OVERALL (N = 341)			ELEMENTARY (n = 270)			SECONDARY (n = 71)		
	Often	Some- times	Seldom	Often	Some- times	Seldom	Often	Some- times	Seldom
Academic needs related to ESL	32%	32%	33%	34%	32%	32%	27%	32%	37%
Refugee & Immigrant adjustment needs	26%	24%	46%	25%	23%	48%	28%	27%	39%

* Statistically significant difference between elementary and secondary responses at $p < .05$

Summary of Students' Characteristics

Overall, students referred to LST for consultation tended to exhibit multiple and inter-related problems. Students discussed tended to have academic, social, and emotional problems. Students in the secondary panel tended to be described by educators and mental health professionals as having more academic weaknesses and psychosocial problems.

3.53 School Team Recommendations

Twenty-eight recommendations concerning school team consultation outcomes were listed. For analysis purposes, these were organized in clusters of a) class-based; b) school-based; c) family-based; and d) community-based recommendations.

Class-based Recommendations

Results indicate that in-class recommendations most frequently discussed (over 50%) were specific teaching strategies, expanded opportunities (remedial and enrichment) and specific consequences for misbehavior. Results indicate that curriculum consultants were least frequently recommended for class recommendation supports (only 11% of respondents often recommended involving curriculum consultants). Overall, result patterns indicate that elementary teams as compared to secondary teams tended to make in-class recommendations more often.

Table 13: Class-based Recommendations

CLASS-BASED RECOMMENDATIONS	OVERALL (N = 341)			ELEMENTARY (n = 270)			SECONDARY (n = 71)			
	Often	Some- times	Not or Infreq- quent	Often	Some- times	Not or Infreq- quent	Often	Some- times	Not or Infreq- quent	
Teaching strategies	62%	21%	14%	66%	18%	14%	47%	31%	16%	*
Group activities	37%	29%	30%	40%	27%	30%	24%	38%	28%	*
Expanded opportunities	60%	22%	15%	62%	21%	14%	49%	24%	18%	
Projects	19%	22%	53%	21%	24%	50%	11%	13%	65%	*
Specific consequences for misbehavior	50%	23%	24%	49%	24%	26%	55%	21%	18%	
Consultation about classroom environment	35%	27%	36%	34%	24%	41%	38%	39%	14%	*
Consultation about resource materials	31%	32%	34%	33%	31%	34%	23%	35%	34%	
Class profiles	39%	24%	32%	43%	25%	28%	25%	20%	47%	*
Classroom observation(s)	40%	31%	26%	44%	30%	25%	23%	37%	32%	*
Involvement of curriculum consultants	11%	25%	61%	13%	29%	57%	3%	11%	78%	*

* Statistically significant difference between elementary and secondary responses at $p < .05$

School-Based Recommendations

School recommendations tended to include most frequently (over 50%): referral for psychological and social work involvement, family interviews, and referral to local IPRC⁹. The least frequently recommended in-school activities included referral for psychiatric assessment (11%), referral for first language assessment (14%), mentoring programs (16%) and ESL consultation (19%). Table 14 shows that a significantly higher percentage of elementary school team respondents who

9 That 54% of respondents thought that referral to local IPRC had been made "often" in the past two years may appear to conflict somewhat with results in Section 3.5, where LST chairpersons indicated that "most" (about 70%) of the students were not forwarded in the last school year. In fact, chairpersons were significantly less likely than others in the LST to say that referrals to local IPRC had been made "often" (31% of chairpersons thought referrals to local IPRC's were often made, compared to 62% of other LST members). Of course, since terms like 'often' tend to mean different things to different people, one should be cautious in interpreting these responses. Still, this raises the possibility that LST members may be over-estimating the proportion of students who do get referred to IPRC's.

recommended psychological involvement, ESL programming, social work assessment, referrals to area and local IPRC's, mentoring programs, and LST reviewing of process and activities.

Table 14: School-based Recommendations

SCHOOL-BASED RECOMMENDATIONS	OVERALL (N = 341)			ELEMENTARY (n = 270)			SECONDARY (n = 71)		
	Often	Some- times	Not or Infreq- uent	Often	Some- times	Not or Infreq- uent	Often	Some- times	Not or Infreq- uent
Involvement of Translators/Interpreters	30%	22%	46%	30%	20%	47%	27%	30%	41%
Monitor effectiveness of program modifications/interventions	49%	31%	17%	51%	30%	17%	42%	34%	16%
Psychological involvement	60%	25%	13%	56%	28%	15%	76%	16%	4%
Social Work involvement	60%	26%	13%	57%	28%	13%	70%	17%	10%
ESL consultation for programming	19%	25%	51%	14%	26%	56%	37%	23%	32%
Referral for assessment - psychological	56%	31%	11%	53%	33%	13%	65%	21%	7%
Referral for assessment - social work	55%	28%	15%	51%	30%	18%	70%	21%	3%
Referral for assessment - psychiatric	11%	15%	70%	10%	14%	73%	16%	17%	61%
Referral for assessment - language	28%	29%	39%	29%	30%	40%	28%	25%	35%
Referral for assessment - first language	14%	20%	60%	12%	22%	61%	20%	13%	55%
Referral for assessment - reading	41%	31%	24%	43%	32%	23%	34%	28%	25%
Interviews with family	70%	18%	10%	69%	19%	10%	72%	13%	9%
Referral to Area IPRC	34%	39%	21%	37%	42%	17%	25%	30%	38%
Referral to Local IPRC	54%	30%	11%	56%	31%	9%	45%	27%	21%
Review diagnostic placement in Special Education	36%	30%	28%	36%	32%	28%	38%	24%	31%
Review integration from Special Education	30%	25%	39%	28%	26%	40%	37%	21%	34%
Mentoring program(s)/transition issues	16%	18%	60%	10%	16%	69%	39%	24%	25%
Review of LST process and activities	21%	28%	44%	16%	25%	52%	41%	37%	16%

* Statistically significant difference between elementary and secondary responses at $p < .05$

Family-based Recommendations

Consultation with parents was viewed by both elementary and secondary team members as a highly important recommendation (80% of secondary and 79% of elementary). The recommendation received the highest rating by all participants, reinforcing the need to strengthen school-home ties.

Recommendations for family counselling and individual counselling were significantly higher at the secondary panel. Specifically, 85% of secondary team members indicated that the team recommended individual counselling for referred students; 38% of elementary team members indicated this.

Table 15: Family-based Recommendations

FAMILY RECOMMENDATIONS	OVERALL (N = 341)			ELEMENTARY (n = 270)			SECONDARY (n = 71)		
	Often	Some- times	Not or Infreq- uent	Often	Some- times	Not or Infreq- uent	Often	Some- times	Not or Infreq- uent
Consultation with parents	80%	14%	4%	79%	16%	4%	80%	9%	4%
Family counselling	37%	32%	29%	34%	32%	33%	49%	32%	14% *
Individual counselling	48%	28%	23%	38%	33%	28%	85%	9%	4% *

* Statistically significant difference between elementary and secondary responses at $p < .05$

Community-based Recommendations

Recommendations most frequently made (over 20% recommended 'often' or 'very often') concerned referral to community agencies for counselling (33%) and consultation with external agencies (23%). The least frequent recommendation was related to tragic event support (this may reflect both identified needs and the fact that the Toronto Board has developed Tragic Event Support Teams, and the LST may perhaps therefore supply follow-up support on an as-needed basis).

Again, there were significant differences between elementary and secondary panels, in that at the secondary level, there were more referrals to community services for medical issues, counselling issues, welfare issues, and legal issues; as well as reporting abuse and tragic events support. These recommendations are consistent with the patterns of identified higher socio-emotional needs amongst high school students.

Table 16: Community-Based Recommendations

FAMILY RECOMMENDATIONS	OVERALL (N = 341)			ELEMENTARY (n = 270)			SECONDARY (n = 71)		
	Often	Some- times	Not or Infreq- uent	Often	Some- times	Not or Infreq- uent	Often	Some- times	Not or Infreq- uent
Referral to community services - medical issues	18%	25%	54%	16%	24%	59%	27%	27%	35% *
Referral to community services - counselling issues	33%	28%	36%	28%	29%	41%	54%	23%	16% *
Referral to community services - welfare issues	12%	12%	72%	5%	12%	80%	38%	16%	38% *
Referral to community services - legal issues	7%	7%	81%	4%	5%	88%	18%	16%	56% *
Request for written information from external agencies	18%	24%	54%	18%	25%	55%	18%	23%	51%
Consultation with external agencies	23%	33%	41%	22%	32%	44%	27%	39%	28%
Reporting abuse	7%	13%	75%	5%	9%	82%	16%	27%	49% *
Tragic Events support	5%	11%	80%	2%	7%	87%	16%	24%	52% *

* Statistically significant difference between elementary and secondary responses at $p < .05$

3.6 Staff Development Topics and Issues

Respondents were asked to list topics or issues related to Local School Teams that could be addressed by professional development. Overall, 56% of respondents commented, compared to 58% in 1990.¹⁰ However, the largest proportion of comments (15% of all respondents) did not recommend topics, but rather noted concerns about effect of cutbacks to Toronto School Board staff, for example¹¹:

We frankly have not had the time to do more support group sessions for students in need, or inservicing teachers regarding preventative strategies, conflict resolution, social skills, stress, etc. We certainly don't know how we will meet the needs of our students with the anticipated cuts. (LST chairperson)

I find the team functioning very well and very much appreciate the recommendations. I am very concerned about cutbacks affecting our team work because team work with teacher participation is very important. (LST Member, homeroom teacher)

Besides concerns about cutbacks, recommendations for staff development closely paralleled the 1990 study. Participants were most likely to recommend PD related to possible interventions (14%), PD related to the team process (12%), PD for teachers (11%), and PD for children and their needs (8%). PD for teachers was the only topic where there was a significant difference between professional groups, with classroom teachers, special education teachers and principals more likely to make this recommendation than psychoeducational consultants and social workers.

Table 17: Staff Development Topics and Issues

PD Topics/Issues	TOTAL (n = 341)	Principal/ (n = 51)	Classroom Teacher (n = 112)	Sp. Ed Teacher (n = 56)	Psycho-Ed Consult- ant (n = 29)	Social Worker (n = 39)
Concerns about staff cutbacks ^ψ	15%	22%	12%	9%	7%	13%
Re: possible interventions	14%	12%	15%	16%	21%	10%
Re: team process	12%	14%	16%	4%	7%	13%
PD for teachers	11%	8%	17%	13%	0%	3% *
Re: children and their needs	8%	8%	8%	16%	3%	0%

^ψ New issue since 1990.

* Statistically significant difference between professional group responses at $p < .05$

Note: Guidance Counsellors and Department Heads were excluded from this breakdown due to small sample size.

¹⁰ In the 1990 study, social workers, psychoeducational consultants and special education teachers were more likely to make comments than principals, vice-principals and teachers. However, in the 1995 study there were no statistically significant differences between professional groups.

¹¹ Although the study had been planned for some time, it went into the field just when budgetary restrictions were being considered for the 1995 year.

Conclusions and Recommendations

Local School Teams at the Toronto Board were formally established in 1986, four years prior to the 1990 survey and nine years prior to the current survey. Study results from 1995 document that Local School Team members tend to have a greater breadth of experience with team consultation (with most of the members having seven or more years of experience). Consequently, the 1995 patterns of findings are more likely to reflect reinforced Local School Team processes and practices.

In comparing the 1990 and 1995 results, one is more struck by similarities than differences. Many of the findings indicate that over the past five years, teams continued to focus on the same needs and the same model of service. This may be due, in part, to the fact that the first study documented that most members were satisfied with their teams as addressing the needs of referred students.

Results continue to show a high degree of consensus regarding the role of teams in understanding and planning interventions for individual students at school and at home, and of providing consultation to educators. There is less consensus regarding multi-dimensional prevention services. For example, in both 1990 and 1995 studies, two thirds or more of meeting time was allotted for discussion of individual students; one third of the time was devoted to discussion of broader issues concerning groups of students or the school as a whole. However, when the Toronto Board formalized Local School Teams nearly a decade ago, it reflected a mission which advocated the importance of broad based prevention programs. With this in mind, it may be a useful time to re-evaluate the mandate and goals of school teams.

The characteristics of students referred to school teams continue to emphasize academic and social-emotional needs. Schools have become intervention sites for numerous learning and social problems affecting students. Those who are at risk for educational failure and social maladjustment continue to pose challenges to teachers and highlight the need for coordinated multidisciplinary consultation services.

A growing and consistent body of research has shown that children who exhibit early signs of academic and social difficulties are at risk for problems later on in life if effective intervention is not provided (Hargreaves and Earl, 1990; American Psychological Association, 1993; Offord and Boyle, 1993). For example, Rush and Vitale (1994) have described how 'at risk' secondary school student characteristics can be identified at the elementary school level (most important of these characteristics relate to academic achievement and social emotional difficulties). Without support, however, the older the students get, the more crystallized their problems become in both academic and social emotional areas. Most recent literature on academically at risk students is agreed on the importance of early childhood and adolescent outcomes; most discussion centers upon the value of interventions (Brown, 1995). As well, students at risk for conduct problems often exhibit low tolerance for frustration in early childhood, tend to have attention deficit problems and poor problem-solving skills (Cole, 1995). In the 1990 and 1995 studies, although elementary and secondary students exhibited similar learning weaknesses, secondary students are more likely to be viewed as having emotional problems and psychological stressors. These findings may be seen as supportive of the literature emphasizing the importance of cost-effective early identification and prevention programs.

Early violence-prevention efforts, such as conflict resolution, are practiced in many schools. Those encompass a range of efforts through the curriculum and school-based activities. When discussing individual students whose maladjusted behavior interferes with their learning, teams are advised to form recommendations in the context of broad school-based initiatives, rather than focus on individual modifications only. Multimodal intervention approaches tend to be more effective with groups of students who exhibit similar needs. These types of programs can be facilitated through the Local School Team. It is only a minority of individuals who usually require intensive treatment and the coordinated efforts of school and community-based treatment settings. Nevertheless, of concern is the high overall percentage of respondents (56%) who described referred students as frequently exhibiting violent behaviors.

Clearly, given the complex problems related to acting out behaviors and victimization, an ecological approach to programming is called for. There is encouraging evidence that multi-disciplinary programs employed on a school-wide basis can be effective in reducing levels of anti-social behavior and improving the school climate. Specifically, longitudinal studies based on Olweus' (1991) model have documented a significant reduction of bullying incidents when a comprehensive plan was developed and employed on the level of community, school, classroom, and individual students. (Ziegler and Pepler, 1993).

A continuum of individual and group interventions is also needed in addressing the high proportion of referred students who were described by respondents as exhibiting depressive symptoms (71%). The causes for such characteristics are multiple and interrelated as quiet students rarely call attention to themselves. Withdrawn behaviors may be symptomatic of academic struggles, social rejection or complex family problems. Again, comprehensive assessment of individual and small groups may provide avenues for short-term school based counselling and consultation.

Consultation with parents was viewed by both elementary and secondary respondents as a highly important recommendation by both elementary and secondary participants (this recommendation in fact received the highest rating by respondents). This is consistent with the Board's system goal of facilitating and increasing parental involvement in the school (see, for example, "Parents as Partners", in *Directions and Initiatives*, June 1994). It also recognises the profound effect of parental involvement on student achievement, as documented by Ziegler (1987) and others.

Immigrant and refugee students are often brought for team consultation, reflecting the transformation of the Toronto Board student population. These students comprise heterogeneous groups whose language development and learning profile are linked to psychological socio-cultural and educational factors. In any school, there is great variability as to how much help they may need in the process of adaptation. Given the recommendations for ESL and refugee students detailed in the present study, it is advisable for school teams to refer to the 1995 study on refugees conducted at the Toronto Board (Yau, 1995). This student documented that refugees who attended the Toronto Board suffer from many post-migration obstacles including post-traumatic stress symptoms and an on-going sense of fear; frequent relocations; and disadvantages in academic performances.

Yau suggested that the Local School Teams could have an important role in addressing these issues, through utilising the LST to "address and monitor the needs of individual and groups of refugee

students on a regular basis in order to ensure immediate intervention and long-term prevention programs, rather than waiting for teacher-initiated referrals."

It appears from the 1995 findings that the number of individual students referred to Local School Team has somewhat increased. Referred students continue to exhibit academic performance deficits, especially in language and study skills. It is thus important to explore learning outcomes detailed in A Curriculum for All Students (1995) and link those to specific recommendations discussed at the Local School Team. It is evident from the number of students who are recommended for special education programs, that school teams continue to facilitate referrals to Identification, Placement and Review Committees. Recommendation #38 of the Royal Commission on Learning (1994), highlights the needs for program modifications and for accountability before decisions to alter students' programs are made: "School Boards look for ways to provide assistance to those who need it, without tying that assistance to a formal identification process." At the same time, following early consultation, interventions and parental consent, special education may best serve the needs of some students. School teams need to document which early recommendations were implemented successfully before considering out-of-class program changes.

Overall, analysis of recommendations documented that secondary Local School Teams were more likely to focus on school recommendations; elementary Local School Teams were more likely to focus on class recommendations. This shows a connection between structural variables within schools and student recommendations that might be further examined. Class profiles, for example, are a valuable consultation service for many elementary and some secondary schools. Although research findings indicate that class profiles are recommended by school teams (according to 43% of elementary, and 25% of secondary respondents), it is not clear from these findings how many schools actually use their team for this type of consultation.

Suggestions for staff professional development, are similar to those identified in 1990 - even though the system provided extensive in-service on school teams in the early '90's. This indicates that despite follow-up inservice with individual schools or families of schools, these needs either remain, or have resumed five years later. System resources for staff release times and human resources in support staff have been reduced. Consequently, it is suggested that this type of inservice may be conducted on an in-school basis by school staff themselves, with the support of the education offices and the consultative staff (see Appendix A for suggested guidelines).

Given the student characteristics that have been documented consistently, it is important to re-evaluate the functions of school teams as they relate to system goals and programs. During this time of diminishing resources, school teams need to refine their operations and monitoring of recommendations for both individuals and groups of students.

Suggested Readings

- American Psychological Association. (1993). Commission on Violence and Youth, Report, Vol. 1.
- Brown, R. S. (1995). Mentoring of At Risk Students: Challenges and Potential. Research Services, Toronto Board of Education (in press).
- Cole, E. (1995). Responding to School Violence: Understanding Today for Tomorrow. Canadian Journal of School Psychology. 11(2), 10-20.
- Cole, E. (1992). Characteristics of Students referred to school teams: Implication for Preventive Psychological Services. Canadian Journal of School Psychology. 8(1), 23-36.
- Cole, E., Siegel, J., and Yau, M. (1990). The Local School Team: Goals, Roles and Functions. No. 194. Research Services. Toronto Board of Education.
- Cole, E., Siegel, J., and Yau, M. (1992). Multidisciplinary School Teams: Perceptions of Goals, Roles and Functions. Canadian Journal of School Psychology. 8(1), 37-51.
- Davidson, I.F. and Wiener, J. (1991). Creating Educational Change: The in-school team. Exceptionally Education Canada. 1(2), 25-44.
- Elliott, S.N. and Sheridan, S.M. (1992). Consultation and Teaming: Problem solving among Educators, Parents and Support personnel. The Elementary School Journal, 92(3), 315-338.
- Green, J. M. (1994). Directions and Initiatives: A Message from the Director of Education. Toronto: Toronto Board of Education.
- Hargreaves, A., and Earl, L. (1990). Rights of Passage. Toronto: Ministry of Education/OISE.
- Huebner, E.S. and Gould, K. (1991). Multidisciplinary Teams Revisited: Current Perceptions of School Psychologists Regarding Team Functioning. School Psychology Review. 20, 3, 428-434.
- Kaiser, S.M. and Woodman, R.W. (1985). Multidisciplinary teams and group decision-making techniques: Possible Solutions to decision-making problems. School Psychology Review. 14, 4, 457-470.
- Offord, D., and Boyle, M. (1993). Helping Children Adjust: A Tri-Ministry Project. ORBIT, Vol. 24, no 1, p. 25.
- Ontario Royal Commission on Learning. (1994). For the Love of Learning. Toronto: Queen's Printer.

Research Services, Toronto Board of Education. (1995). Demographic Profiles of Elementary and Secondary Students. Research Services, Toronto Board of Education.

Rosenfield, S.A. (1987). Instructional Consultation. Hillsdale, NJ; Erlbaum.

Toronto Board of Education. (1989). The Student Services Review. Toronto, Ontario.

Toronto Board of Education. (1995). A Curriculum for All Students. Toronto, Ontario.

Yau, M. (1995). Refugee Students in Toronto Schools: An Exploratory Study. Research Services, Toronto Board of Education.

Ziegler, S. (1987). The Effect of Parent Involvement on Children's Achievement. Research Services, Toronto Board of Education.

Ziegler, S., and Pepler, D. (1993). Bullying at school: pervasive and persistent. ORBIT, Vol. 24, no. 1, pp. 29-31.

Appendix A: Discussion Guidelines for Planning an Effective Model

- What are the characteristics of the student and parent community?
- What needs were identified by teachers? parents?
- Is the turnover of staff and/or students high?
- What proportion of the children have experienced disruptions and losses in their lives?
- What are the cultural backgrounds of the families in the school community?
- What community supports are available to the school?
- What are the family-school relationships?
- Who should be a Team member? Why?
- Are parents going to be invited to meetings as collaborators and decision makers?
- What kind of outreach programs can be planned for minority language families? By whom?
- How often should the Team meet? How long should a typical meeting be?
- Who should be the Team chairperson? Why?
- Who should have the responsibility for scheduling meetings and coordinating follow-up?
- What type of summary forms should be developed for taking minutes?
- Who should be responsible for taking minutes at Team meetings?
- What should the goals of the Team be? Why?
- What professional development is needed in order for the Team to function well?

Appendix B:

Discussion Guidelines for Evaluation of Team Effectiveness

- Is the Team facilitating services for individual students? groups? class? the whole school?
- How are goals, services and responsibilities decided upon? By whom?
- How is this information conveyed to the school staff and parents?
- To what extent does the Team accomplish its goals?
- What works well? What could be done better?
- Are Team roles clear to members?
- Do people feel comfortable in their roles? Why? Why not?
- Do all members participate equally?
- Do members feel listened to? Are their contributions acknowledged?
- Did the Team develop a process for giving and receiving feedback?
- Do people feel they work as a Team?
- Are procedures designed through consensus?
- Are tasks understood, shared and acted upon?
- What are short term goals? Long term goals?
- Do teachers and parents feel supported by the Team?
- Do invited members participate in decision-making?
- Does the Team have a systematic approach to collecting and analysing information?
- What process should be in place to review and evaluate Team services and progress?

**Appendix C:
Research Instruments**

TORONTO BOARD OF EDUCATION



Director
Joan M. Green

Associate Directors
Harold Brathwaite
John B. Davies

Comptroller of Finance
Ron Trbovich

Comptroller of Plant & Planning
Norbert J. Hartmann

155 College Street
Toronto, Ontario, M5T 1P6
Tel. (416) 397-3000
Fax (416) 393-9969

April 10, 1995

Dear Principal,

In 1990, members of elementary and secondary Local School Teams completed questionnaires which studied School Team functions and goals. This is a follow-up survey, designed to learn what patterns have changed, and what issues are of importance to Team members. Your school is among the 50% of elementary and secondary schools in the Board that have been randomly selected.

The information in this survey is CONFIDENTIAL. Results will be prepared in summary form only, and will be forwarded to you and members of the school's Team.

We would be grateful if you could do two things: distribute the questionnaires, and return the completed questionnaires in the attached sealed envelope to Research Services.

Distributing the questionnaires: Distribute the blue-coloured questionnaire to the Local School Team Chairperson, and the white-coloured questionnaires to the school psychologist, the school social worker, one special education teacher on the Team, and four teachers in the school. (Please select the four teachers randomly.)

Please collect the questionnaires by Thursday, April 27, and return them in the attached envelope to Research Services.

We hope to provide you with the results this September. Thank you again for your help.

Yours,

Ester Cole

Rob Brown

Dr. Ester Cole
Team Co-ordinator, Psychology (North Office)

Rob Brown
Research Officer, Research Services



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TORONTO BOARD OF EDUCATION



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Dear School Team Member,

Thank you for taking the time to respond to this survey of Toronto Board of Education staff on Local School Teams.

As you know, Local School Teams have been mandated at our School Board since 1986. In 1990, members of elementary and secondary Local School Teams completed questionnaires which studied School Team functions and goals. This is a follow-up survey, designed to learn what patterns have changed, and what issues are of importance to Team members. In addition to yourself, the survey is being given to other members of your Team and a number of teachers in your school.

By responding and returning the completed questionnaire you can ensure that your particular experience, circumstances and point of view will be reflected in the report that will be prepared.

Your school is among the 50% of elementary and secondary schools in the Board that have been randomly selected. The information given is CONFIDENTIAL. Results will be prepared in summary form only and will be forwarded to you.

The survey should take 15-20 minutes to complete. Please fill it out as soon as possible. Place it in the accompanying envelope and return it to your principal. Your principal will return the envelope, together with others, in a sealed package to the Research Services department.

Please respond by or before April 27, in order for us to be able to start the analysis and summaries as soon as possible. We hope to provide you with the results in September. Thank you again for your help.

Yours,

Ester Cole

Rob Brown

Dr. Ester Cole
Team Co-ordinator, Psychology (North Office)

Rob Brown
Research Officer, Research Services



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SCHOOL TEAM QUESTIONNAIRE

The following questionnaire is to assist School Teams
in studying TBE practices and in program planning.

To be Completed By: The School Team Chairperson

A. Background Information

1. What is your present job title?

- | | | |
|---|--|--|
| <input type="checkbox"/> principal/vice principal | <input type="checkbox"/> department head | <input type="checkbox"/> special education teacher |
| <input type="checkbox"/> homeroom teacher | <input type="checkbox"/> guidance | <input type="checkbox"/> school psychologist |
| <input type="checkbox"/> social worker | <input type="checkbox"/> other (please describe) _____ | |

2. In what kind of school do you work?

Elementary	_____
Secondary	_____

3. For how long have you participated in school team meetings (years), whether at this school or at other schools?

- | | |
|------------------------------|-------------------------------|
| <input type="checkbox"/> 1-2 | <input type="checkbox"/> 7-8 |
| <input type="checkbox"/> 3-4 | <input type="checkbox"/> 9-10 |
| <input type="checkbox"/> 5-6 | <input type="checkbox"/> 11+ |

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B. Information About Your School Team For the Past Two Years

1. In a typical Team meeting, estimate the percentage of time allotted for discussion of:
- | | | | | | |
|---------------------|--------|------------------|--------|-------------|--------|
| Individual Students | _____% | Classroom Issues | _____% | Team Issues | _____% |
| Groups of Students | _____% | School Issues | _____% | | |
2. a) If individual students were discussed, please estimate the number of students that were discussed by your School Team last year _____
- b) Please estimate what percent of these would be discussed on more than one occasion
_____%
3. Please estimate what percentage of students discussed by the Team during the last school (93-94) year were forwarded to:
- | | | | |
|------------|--------|-----------|--------|
| Local IPRC | _____% | Area IPRC | _____% |
|------------|--------|-----------|--------|

C. School Team Goals

1. Please rate the following School Team goals in terms of the personal importance you attribute to each. (Use a number from 1 to 5.)
- | | Not At All Important | | | | Very Important |
|---|----------------------|-------|-------|-------|----------------|
| | 1.... | 2.... | 3.... | 4.... | 5.... |
| a) To facilitate referrals for specialized services: (Educational, Psychological, Social Work.) | 1.... | 2.... | 3.... | 4.... | 5.... |
| b) To coordinate the work of team members. | 1.... | 2.... | 3.... | 4.... | 5.... |
| c) To monitor referrals for Special Education placement. | 1.... | 2.... | 3.... | 4.... | 5.... |
| d) To monitor integration from Special Education. | 1.... | 2.... | 3.... | 4.... | 5.... |

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C. School Team Goals Cont'd

	Not At All Important				Very Important
e) To understand individual student needs and plan appropriate interventions, in school, in the community, at home.	1....	2....	3....	4....	5....
f) To provide multidisciplinary consultation to school personnel regarding the needs of individual students.	1....	2....	3....	4....	5....
g) To coordinate specialized counselling groups or other programs for students "at risk".	1....	2....	3....	4....	5....
h) To help identify common student needs and assist in planning schoolwide preventative programs and procedures.	1....	2....	3....	4....	5....

D. Information about student characteristics

Please estimate how often individual students who have been referred to the Team have the following characteristics. Please circle one number from 1 to 5 (consider the past 2 years).

	Seldom				Very Often
Oral language is at or above grade level	1....	2....	3....	4....	5....
Reading is at or above grade level	1....	2....	3....	4....	5....
Spelling is at or above grade level	1....	2....	3....	4....	5....
Written language is at or above grade level	1....	2....	3....	4....	5....
Math is at or above grade level	1....	2....	3....	4....	5....
Handwriting/printing is at or above grade level	1....	2....	3....	4....	5....
General knowledge is at or above grade level	1....	2....	3....	4....	5....
Requires advanced/enriched programming	1....	2....	3....	4....	5....

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D. Information about student characteristics - Cont'd

	Seldom			Very Often	
Catches on to new ideas quickly	1....	2....	3....	4....	5....
Is creative/has many interests	1....	2....	3....	4....	5....
Needs extra explanations to understand new ideas	1....	2....	3....	4....	5....
Is likely to forget instructions or routines	1....	2....	3....	4....	5....
Can work in a co-operative group	1....	2....	3....	4....	5....
Manages time appropriately	1....	2....	3....	4....	5....
Work is adequately organized, tidy	1....	2....	3....	4....	5....
Is task committed	1....	2....	3....	4....	5....
Works at tasks only when watched or compelled	1....	2....	3....	4....	5....
Easily distracted	1....	2....	3....	4....	5....
On the whole, attends well	1....	2....	3....	4....	5....
Works too quickly and makes careless mistakes	1....	2....	3....	4....	5....
Works steadily, but too slowly to finish in time allowed	1....	2....	3....	4....	5....
Daily work is adequate, but has difficulty with tests or quizzes	1....	2....	3....	4....	5....
Is motivated to learn	1....	2....	3....	4....	5....
Completes homework/projects	1....	2....	3....	4....	5....
Prepares for quizzes, tests, exams	1....	2....	3....	4....	5....
Participates actively in class	1....	2....	3....	4....	5....
Seeks help appropriately	1....	2....	3....	4....	5....

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D. Information about student characteristics Cont'd

	Seldom				Very Often
Likes academic challenges	1....	2....	3....	4....	5....
Enjoys extra-curricular activities and/or sports	1....	2....	3....	4....	5....
Obeys school rules	1....	2....	3....	4....	5....
Appreciates attention from teachers	1....	2....	3....	4....	5....
Appropriate social skills with teachers and peers	1....	2....	3....	4....	5....
Is frequently in arguments	1....	2....	3....	4....	5....
Acts violently	1....	2....	3....	4....	5....
Acts impulsively	1....	2....	3....	4....	5....
Is quiet, withdrawn	1....	2....	3....	4....	5....
Behaves immaturely	1....	2....	3....	4....	5....
Shows inappropriate sexual behaviour	1....	2....	3....	4....	5....
Has high self-esteem; positive self concept	1....	2....	3....	4....	5....
Shows frequent mood swings	1....	2....	3....	4....	5....
Is unhappy, depressed	1....	2....	3....	4....	5....
Has nervous habits	1....	2....	3....	4....	5....
Has phobias	1....	2....	3....	4....	5....
Is worried, anxious	1....	2....	3....	4....	5....
Can tolerate frustration	1....	2....	3....	4....	5....
Attendance Issues	1....	2....	3....	4....	5....
Substance Abuse	1....	2....	3....	4....	5....

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D. Information about student characteristics - Cont'd

	Seldom				Very Often
Child Abuse	1....	2....	3....	4....	5....
Medical Needs	1....	2....	3....	4....	5....
Family Stresses	1....	2....	3....	4....	5....
Academic Needs related to E.S.L.	1....	2....	3....	4....	5....
Refugee & Immigrant adjustment needs	1....	2....	3....	4....	5....

E. School Team Recommendations:

Based on your experience with School Teams, please indicate how frequently each of the following types of recommendations have been made in the last two years. Please circle a number from 1 to 5, where 1 is 'not at all' and 5 is 'very often'.

	Not At All				Very Often
1. Specific curriculum modifications					
- teaching strategies	1....	2....	3....	4....	5....
- group activities	1....	2....	3....	4....	5....
- expanded opportunities (remedial & enrichment)	1....	2....	3....	4....	5....
- projects	1....	2....	3....	4....	5....
2. Specific consequences for misbehaviour	1....	2....	3....	4....	5....
3. Consultation about classroom environment	1....	2....	3....	4....	5....
4. Consultation about resource materials	1....	2....	3....	4....	5....
5. Class profiles	1....	2....	3....	4....	5....
6. Classroom observation(s)	1....	2....	3....	4....	5....
7. Involvement of curriculum consultants	1....	2....	3....	4....	5....
8. Consultation with parents	1....	2....	3....	4....	5....

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E. School Team Recommendations Cont'd

	Not At All			Very Often	
9. Involvement of Translators/Interpreters	1....	2....	3....	4....	5....
10. Monitor effectiveness of program modifications/ interventions	1....	2....	3....	4....	5....
11. Family counselling	1....	2....	3....	4....	5....
12. Individual counselling	1....	2....	3....	4....	5....
13. Psychological involvement	1....	2....	3....	4....	5....
14. Social Work involvement	1....	2....	3....	4....	5....
15. E.S.L. consultation for programming	1....	2....	3....	4....	5....
16. Referral for assessment					
- psychological	1....	2....	3....	4....	5....
- social work	1....	2....	3....	4....	5....
- psychiatric	1....	2....	3....	4....	5....
- language	1....	2....	3....	4....	5....
- first language	1....	2....	3....	4....	5....
- reading	1....	2....	3....	4....	5....
17. Referral to community services:					
- medical issues	1....	2....	3....	4....	5....
- counselling issues	1....	2....	3....	4....	5....
- welfare issues	1....	2....	3....	4....	5....
- legal issues	1....	2....	3....	4....	5....
18. Request for written information from external agencies	1....	2....	3....	4....	5....
19. Consultation with external agencies	1....	2....	3....	4....	5....
20. Interviews with family	1....	2....	3....	4....	5....
21. Referral to Area IPRC	1....	2....	3....	4....	5....
22. Referral to Local IPRC	1....	2....	3....	4....	5....
23. Review diagnostic placement in Special Education	1....	2....	3....	4....	5....

E. School Team Recommendations Cont'd

	Not At All				Very Often
	1....	2....	3....	4....	5....
24. Review integration from Special Education	1....	2....	3....	4....	5....
25. Reporting abuse	1....	2....	3....	4....	5....
26. Tragic Events support	1....	2....	3....	4....	5....
27. Mentoring program(s)/transition issues	1....	2....	3....	4....	5....
28. Review of L.S.T. process and activities	1....	2....	3....	4....	5....

F. What issues/topics related to the functioning of School Teams would you like future professional development sessions to address?

THANK YOU FOR YOUR PARTICIPATION

revised 30.03.95
ref:LST1.ec