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ABSTRACT

Following up on an earlier national survey study of Canadian teachers' formal and informal learning, this study had 13 Ontario secondary teachers keep detailed logs of their day and evening activities, along with notations about what they may have learned as a result of engaging in each activity, for 7 consecutive days in late 1999, and again in early 2000. Following an analysis of the diaries, researchers conducted telephone interviews with four of the teachers to further explore their formal and informal learning, particularly pertaining to several province-wide schooling reform initiatives being introduced at the time. The diaries revealed an average teacher workload of 48.7 hours per week. These actual hours of work represented approximately 17 percent more hours per week than the hours calculated by these same teachers when asked in the earlier Phase One survey simply to estimate their weekly workload. The diaries also indicated that these teachers spent an average of 7 hours per week in informal learning specifically about schooling and teaching-related matters through various intentional learning activities. They spent an average of 6 hours per week in intentional informal learning pertaining to a wide variety of other subjects. Appendixes include the original diary survey package, the February revised diary package, and miscellaneous data from the CIF/NALL Survey, 1998-9. (Contains 55 bibliographic references, 17 endnotes, and 6 tables.) (SM)

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Informal/Formal Learning and Workload Among Ontario Secondary School Teachers

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Abstract

Teachers' work in Canada, as elsewhere, is undergoing considerable change. Increasingly, standardized syllabi, curricula, assessment, student testing and reporting regimes are being imposed by central departments of education, and judging from reports on these interventions, provision for teachers to engage in formal workshops or training sessions to help understand and implement these initiatives has been uneven.While teachers, like all employees, have always engaged in incidental and informal learning with colleagues and others, the nature and extent of these recently imposed schooling reforms have raised questions about the ways in which teachers' "on-the-job" learning practices might also have been affected.

Following up on an earlier national survey study of teachers' formal and informal learning practices and interests, this paper covers two subsequent phases of the study undertaken by members of the same research group. For seven consecutive days in November/December 1999, and again the following February/March, thirteen Ontario secondary school teachers kept detailed logs of their day and evening activities, along with notations about what, if anything, they may have learned as a result of engaging in each of their numerous activities. Following an analysis of these diaries, lengthy telephone interviews were conducted during September 2000 with four of the diarists, for the purpose of exploring more thoroughly their engagement in formal and informal learning practices, particularly as they pertained to several province-wide schooling reform initiatives which were being introduced by the provincial government at the time.

The 23 diaries revealed an average teacher workload of 48.7 hours per week, comparable to that found in similar teacher workload studies in other jurisdictions. In addition, these actual hours of work, as demonstrated by these detailed logs, represents an average of 17% more hours per week than the hours calculated by these same teachers when asked in the earlier Phase One survey questionnaire simply to estimate their weekly workload. The diaries also indicated that this group of teachers spent an average of 7 hours per week in informal learning specifically about schooling and teaching-related matters, through a variety of intentional learning activities - conversations, meetings, reading print materials of various kinds, educational/ documentary television and video, and so on. In addition, this group spent an average of 6 hours per week of intentional informal learning pertaining to a wide variety of other subjects and themes (eg. world events, home cooking/repair, biography, history, etc). Based on the data from the subsequent interviews, these teachers reported high levels of engagement in intentional informal learning

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activities, both at school and at home, in order to learn about and cope with the immense task of implementing the reforms. The paper ends with discussion on how this new informal learning resulted in new perceptions and beliefs about teacher identity, professionalism and the role of teacher unions.

INTRODUCTION

This paper is the second to be produced from an ongoing research study of teachers in Canada, under the auspices of a national network entitled New Approaches to Lifelong Learning (NALL), coordinated by David Livingstone at the Ontario Institute for Studies in Education/University of Toronto, and partially financed by the Social Science and Humanities Research Council of Canada.1 Funding for this study has been provided by NALL, and by the ten provincial teachers' federations/unions across Canada. The first phase of this study involved a pen-and-paper questionnaire survey of randomly sampled teachers across Canada, and has already been documented in a paper entitled "Teacher Learning, Informal and Formal: Results of a Canadian Teachers' Federation Survey" (Smaller, Clark, Hart, Livingstone and Noormohamed, 2000).2

BACKGROUND AND CONCEPTUAL OVERVIEW

Overshadowing this study are a number of conceptual questions, not the least of which is the meaning of the term "informal learning" itself. What is informal learning? When does it happen? How can you tell? How is it differentiated from other kinds of learning? To be sure, these are complex questions, and this complexity is certainly reflected in the existent and ongoing research and literature. David Livingstone suggests that informal learning is

> any activity involving the pursuit of understanding, knowledge or skill which occurs outside the curricula of institutions providing educational programs, courses or workshops. . . . Explicit informal learning is distinguished from everyday perceptions, general socialization and more tacit informal learning by peoples' own conscious identification of the activity as significant learning. The important criteria that distinguish explicitly informal learning are the retrospective recognition of both a new significant form of knowledge, understanding or skill acquired on your own initiative and also recognition of the process of acquisition (1999, 3-4).

Another similar definition is offered by Watkins and Marsick.

> Informal and incidental learning is learning from experience that takes place outside formally structured, institutionally sponsored, class-room based activities. Informal learning is a broad term that includes any such learning; incidental learning is a subset that is defined as a by-product of some other activity. Informal learning can be planned or unplanned, but is usually involves some degree of conscious awareness that learning is taking place. Incidental learning, on the other hand, is largely unintentional, unexamined, and embedded in people's closely held belief systems (1992, 288).

In both cases, these definitions suggest that informal learning occurs apart from formal courses or institutions, but at the same time they carefully designate "explicitly" informal learning as that learning which is intentioned and/or identified by the learner, as compared to "incidental" learning which is unintended (Watkins and Marsick) and/or unidentified (Livingstone) by the learner. As written, they certainly summarize concisely much of the discussion and debate, at least concerning definitions of the term informal learning. At the same time, however, implicit in concise definitional statements like these are a multitude of nuances and complexities. Some of these will become apparent later in the paper, in our attempts to "operationalize" these definitions in order to assess reports from respondents - to determine or confirm in some way that informal learning had indeed, taken place in each instance.

In addition to the complexity of definition, this study, and particularly the overall theme of informal learning, also exist within a larger realm of contextual complexity. While informal learning has been of interest to some researchers for over forty years (see, for example, Tough 1978; Knowles1970; Penland 1977), it has certainly become a topic of much interest, and funding, during the last decade - raising

questions about agency and intent in relation to this recent upsurge of attention (see, for example, Garrick 1996, Boje 1994). While historical interest in informal learning stems from a wide variety of people and interests, there is no doubt that recent government, foundation and private sector support for further research in this area extends beyond simple humanitarianism and generic educational interests. John Garrick raises these issues in his recent paper "Informal Learning: Some Underlying Philosophies," underscored by his opening question, "why has this form of learning become an important discourse at this particular historic moment?" (1996, 21). In his discussion, he suggests that much of the recent surge is directly related to changes in the global economy, the perceived need for educating for a new "global" worker, and at the same time undertaking this training through modes of learning which do not involve expensive, often unwieldy, formal education structures.

Indeed, a quick reading of the background documents like those from the Social Sciences and Research Council of Canada pertaining to the funding which partially funded this project, certainly alludes to these perspectives - language replete with statements such as "the importance of Canada moving to a knowledge economy," "Global competitiveness," "need for flexibility through life-long learning, " "opening up learning opportunities for all," and "new markets for skills," not to mention the larger political, social and economic values which they portend.3 While there is no question that this study reflects interests of furthering critiques of recent main-stream perspectives on informal learning, it would certainly be naive to deny the pervasive influences of neo-liberalism on much of life these days, including research activity.

Another theme informing this study is reflected in the increased interest among educational researchers about the related concept of "teacher knowledge." This research has taken a number of directions in recent years, including explorations about what it is, what it should be, how it is acquired and/or enhanced, and the nature of its relation to student and school success (Briscoe 1997; Klein 1996; Gibson and Olberg 1998; Donmoyer 1995; Ontario College of Teachers 1999). Although there is large and increasing volume of literature covering these themes, to date there has been much less attention paid to how teachers themselves see these matters personally - what they think is important to know and to learn, how they would like to engage in this learning process, and what they are already doing in this regard. These precise questions have born directly on the purpose and methodology of this study.

At another level, directly linked to issues of teacher knowledge, are issues of professionalization. Viewed through the eyes of social stratification theorists such as Larsen 1980 and Derber 1990, professionalization has been, and remains, an ongoing historic process, both concrete and ideological, whereby the status and authority of particular middle-class occupational groups have been enhanced through state intervention, in exchange for their social regulatory work in society overall (not to mention their own self-regulation). Teachers have historically not been part of the "inner circle" of the most-favoured occupational groups. To be sure, the official rhetoric surrounding their work has often been based on their purported "status" in, and importance to, society. Ironically however, precisely because of their importance as "proper" role models for future citizens, in most western nations the control over their selection, training, certification and practice has generally remained very much in the hands of government and/or its closely monitored agencies (see, for example, Duman 1979; Gorelick 1982; Lawn 1996; Labaree 1992; Atkins and Lury 1999).

This contradictory nature of professionalism has certainly been demonstrated in the recent context of neo-liberal schooling reform initiatives being promoted and undertaken in many western jurisdictions. While the rhetoric of professionalism is often used in these contexts, the general import is usually that of the "need" for the "upgrading" or "retraining" of teachers. Given these strong ideological messages, it is not surprising that a recent Ontario survey found a significant percentage of parents (75%) in favour of requiring teachers to submit accounts of their learning activities to their principals (rather than being allowed to use their own professional judgements about their own in-service learning), and an even higher percentage (83%) in favour of principals being required to use provincial guidelines and methods to evaluate their teachers (Livingstone et al 2001, 32). To be sure, very few teachers, and certainly none of their unions, are opposed to on-going opportunities for further education and training. Many, however, are very concerned about the control over teacher learning being taken entirely out of the hands of teachers - leaving others with the power to determine unilaterally what shall be learned, how much, when, and in what manner. These are not idle worries. Governments in British Columbia and Ontario have already imposed externally-controlled "professional colleges" on teachers in Canada, and

other provincial governments are following these events closely. In Ontario, this body is presently working to construct new regimes of compulsory teacher recertification courses, and there is no indication that teachers themselves will have any say in determining what the structure, process or content of these regimes might be, and whether these regimes would be designed to build on existing teacher knowledge, or in opposition to it.

Given this context, our research group made the decision very early in the planning process to approach the Canadian Teachers Federation, the umbrella organization of the teachers federations in the 10 provinces of Canada, to seek their involvement in this study. We saw their input into planning the study from teachers' perspectives as being highly important, as well as assisting with access to teachers names and addresses for the survey, and to providing legitimacy for the study in the eyes of the participants. Given their overall interests in teachers'learning on the one hand, and their concerns about increasing state control over "teacher development" regimes on the other, the federations welcomed the opportunity to participate, and to assist in developing a data-base, both of teachers' existing involvement in their own learning, as well as their further interests in that regard. The provincial federations also contributed financially towards the printing and mailing costs of the survey.

As a final contextual note, this study was undertaken during a time of much upheaval in schools, with government-initiated and imposed restructuring projects in full swing in a number of provinces. In Ontario, for example, the first phase of our study was undertaken just shortly after virtually all of the elementary and secondary schools in the province were closed for two weeks by 125,000 teachers on an unofficial strike, in protest over new government regulations and unilaterally imposed changes. In addition to whatever ways these conflicts and disruptions affected teachers, students and parents, they provided a serendipitous opportunity for examining teachers' informal learning. As Jean Lave (1993, 15) has noted, learning occurs through "situated activity," and often through "conflict [which] is a ubiquitous aspect of human existence. In undertaking the interviews in the most recent phase of the study, we were able to invoke discussion of specific informal learning which had been situated not just within the complex and ubiquitous routines of "normal" school activity but in a context of rapid change in teachers' working conditions.

BRIEF SUMMARY OF THE FIRST PHASE

Briefly described, the eight-page questionnaire surveyed a number of themes - demographic background, workload, recent formal learning pursuits, and a number of sections relating to their informal learning at their workplace, home and in the community (for further discussion of conceptual issues related to formal and informal learning, see Livingstone 1999). It was mailed out in May of 1999 to 1945 randomly sampled elementary and secondary school teacher across English Canada. 753 responses were received, along with another 210 forms undelivered because of address changes, giving an effective response rate of about 40%. Comparisons of this group with national statistics on teachers suggested that our respondent group was very representative, certainly in regard to gender, age and ethnic/racial background.

The full-time respondents reported an overall average workload of 47 hours per week, comprised of assigned and voluntary labours. On average, teachers were assigned 28 hours per week for working directly with students, and such additional tasks as school administration, library coordination, administration, hall supervision, preparation and marking, and so on. In addition to these formally assigned hours, teachers reported that, on average they spent a further 19 hours per week on school related tasks - approximately 10 hours at school, and 9 hours at home and elsewhere. Such tasks ranged from preparing and marking student work and supervising extra-curricular activities, to communicating with students and parents, and participating in subject, school, board and teacher federation meetings. This overall workload of 47 hours per week was consistent between those who indicated they spent most or all of their time directly in the classroom (teachers and department heads), and those respondents who held other educational positions (such as principals, consultants, program coordinators).

These teacher workload findings are similar to studies which have asked teachers in other jurisdictions the same kinds of questions. Recent studies of teachers in Nova Scotia and secondary teachers in Alberta found them working 52.5 and 53.3 hours per week, respectively (Harvey and Spinney 2000; Alberta Teachers Association 2000). Earlier studies of teachers in Ontario and Saskatchewan reported weekly

working hours of 52.3 and 47.4 respectively (Saskatchewan Teachers' Federation 1995; Ontario English Catholic Teachers Association 1996). Similarly, a 1994 national study of U.S. full-time elementary and secondary public school teachers found that they were required to be at school 33 hours per week, and that they worked an additional 12 hours per week, before and after school and weekends, for a total of 45 hours per week (National Centre for Education Statistics 1997). A 2000 British study found that teachers in primary and secondary schools worked on average 53 and 51 hours per week respectively (an increase of 4.0 and 3.4 hours per week respectively, from a similar study conducted six years earlier), with most working up to 15 hours a week at evenings and weekends. (School Teachers Review Body 2000; see also Michelson and Harvey 1999; Drago et al 1999).

The NALL survey recognized that teachers also do other forms of unpaid work in terms of housework and community volunteer work. Teachers on average were found to devote over 15 hours per week to household tasks including cooking, cleaning and childcare, and about 4 hours a week to various community organizations.

The NALL teacher survey also found that teachers were much more likely that the general labour force to take further education courses and workshops, devoting an average of 8 hours a week to such organized studies. 86% of all respondents stated they had been involved in at least one formal learning activity - defined as a course, conference or workshop - during the previous twelve months, and most had engaged in two or more such activities. While all groups reported high levels of engagement, there was some variation in the amount of formal learning engagement among the respondents - with women, women with children, younger teachers, and teachers in secondary schools all tending to be somewhat more involved in their own formal learning than their respective counterparts. Work-related matters, computers and academic courses rated as the top three themes of interest, and an even higher percentage of respondents - 88% - stated that they would definitely, or possibly, be taking one or more courses or workshops in the ensuing twelve months.

In relation to teachers' self-reporting on their own informal learning, there were also a number of interesting pictures presented. Overall, teachers estimated that they devoted an average of at least 10 hours a week to informal learning activities related to either their paid employment, housework, community work or their general interests. Virtually all (98%) of teachers recognized that they had engaged in informal learning in their workplaces, in ways which assisted them in their present jobs, and/or would do so in new work situations. Many themes were identified by these respondents - 89% had engaged informally in learning about computers, and well over 60% stated they had learned about matters relating to students, to course subjects, to communication skills, to classroom management skills, and to pedagogy. In addition to school-based learning, when asked what informal learning they may have done in their own homes, over two-thirds stated they had benefitted from such learning, including such themes as home repair and renovation, gardening, cooking, child and elder care, and budgeting. Over three-fifths also indicated involvement with community volunteer organizations, and almost three-quarters of this group listed learning in areas such as interpersonal skills, community knowledge and organizational/leadership skills. When these classroom teachers were asked how they best preferred engaging in new learning activity, only 20% stated that they would undertake this learning through a formal learning methods. By comparison, almost 60% stated that they would find informal learning methods more useful (the remainder were open to relying on both approaches, depending upon what was to be learned).

The general profile of Canadian teachers work and learning activities that emerged from the first phase of the NALL study suggested that teachers typically devoted most of their working hours to their paid and unpaid work, were exceptionally active participants in further education and also engaged in a great deal of job-related informal learning. The unanswered question was how they organized their time to accomplish all this.

PHASE TWO - DIARY SURVEY

Introduction - The final paragraph of the questionnaire used in the national teachers' survey explained that the research project might be continued, and asked respondents to consider voluntarily including their names and addresses. Approximately 33% overall did so, a number which included 28 secondary school teachers working full-time in the province of Ontario.4 In September 1999 this group was sent a

letter explaining that the research was continuing, that it would involve keeping a diary for a week, and that a researcher would contact them by phone to discuss the project and ask whether they would be willing to continue with it. From this number, 19 teachers initially agreed to participate in this phase of the project.5

This method of respondent-maintained diaries to collect data on their daily activities has been used successfully in a number of jurisdictions, with a range of respondent-types (teachers, other workers, housewives, etc), for a number of research purposes, and the work of a number of researchers was drawn upon to conceptualize and plan this project (Peters and Raaijmakers 1998, Michelson 1998 and Harvey 1984).

In early November 1999, after a short pre-test involving four teachers, survey packages were mailed out to the 19 teachers (Appendix A). The cover letter explained the overall purpose of the project, and main procedure - asking teachers to record, for seven consecutive days, every activity in which they engaged over the 24 hours of each day of that time period. In particular, the informal learning aspects were emphasized, with the request, wherever possible, "to note when you believe that you have gained any new knowledge, understandings and/or skills, as a result of your activity during any specific activity." A further section of the letter provided more explicit instructions. In reference to the column in the response logsheet labelled "Learning Aspects/ Comments," respondents were informed that "[W]hen you believe that the primary activity during specific time periods occasioned self-learning on your part, please make brief notations here describing what you believe you have learned during that interval (eg. new computer command; new [school] board procedure; new approach to teaching a skill; etc.)"

Also included in this initial package was a two-page summary entitled "Categories for Teacher Workload/Learning Diaries," which contained three sections: Employment-Related Duties, Activities Not Related To Employment; and Formal Education and Informal Learning Activities. This last section included a number of sub-categories (eg. Informal Learning in the Home; Informal Learning in the Community), each with several examples of informal learning activity (eg. "learning about home/auto maintenance or repair, cooking, cleaning, child or elder care, health issues, social issues, interpersonal skills, etc.").

The third item in the package was one copy of the diary log response form (also included in Appendix A). Respondents were asked to make a number of copies of the form, and then, for each of seven consecutive days during late November, they were asked to make a notation of every activity they engaged in during all of their waking hours. The form consisted of two narrow and two wide columns and 20 rows. In the first two columns respondents were asked to write in the precise time when they began and ended each new activity. In the third column (labelled "Primary Activity (What you did)"), corresponding to each time interval, they were asked to explain briefly what each activity was (eg. making breakfast; driving to work; teaching a math class; meeting with parent; taking daughter to piano lesson; reading the paper; etc.). In the corresponding row of the final, right-hand column (labelled "Learning Aspects/Comments"), respondents were asked to note down what they had learned while engaged in that activity, if anything. At the end of the week they were asked to make a photocopy of these time-sheets as a back-up and mail the originals to the project. Participants were also informed that an honourarium of $75.00 would be paid to those returning complete diary logs.

Of the 19 packages sent out, 13 completed logs were returned (follow-up phone calls to the others failed to result in further responses, as teachers cited overwork and family time pressures among reasons for not being able to complete the diaries). These diaries provided rich and detailed pictures of one week in the lives of these teachers - their paid and unpaid work, as well as other home, community and recreational activities. However, as a source of data for understanding the specificity of informal learning practices, these diaries were more problematic. Relatively few notations were recorded in the column labelled Learning Aspects and Comments, and from many of the comments that were made, it was clear that, despite the detailed written instructions provided, we had not been able to convey sufficiently the need for specific descriptions of learning outcomes to some respondents. For example, a common comment following up on an activity listed in the previous column was their affective response to it - "felt good about what I had done," or "father's pride in seeing her grow with competition." Other responses - were equally problematic - such as the one respondent who reported that he/she had attended a three-and-a-half hour night class as part of a professional development program, but, for whatever

reasons, wrote nothing in the "learning" column. Problematic also, were the many occasions when some respondents reported explicitly on learning having occurred as a result of reading a newspaper or viewing a documentary, while other respondents reported engagement in the same activities, but with no "learning" comment? Did this constitute an actual, and self-perceived, difference in self-learning processes? Or, were these simply differences in understanding the purpose of the survey, or perhaps differences in circumstances and/or motivation to fill out a form at any given instance?6

Given the ambiguity of results from this initial round of data collection, it was decided to conduct a second round later in the school year. Four of the respondents were randomly selected, and interviewed by phone in the hopes of getting feedback which might improve the instructions and the responses. As a result of these telephone discussions a new package was prepared which contained more explicit instructions, and included specific examples of possible response types. (Appendix B). In addition, the diary form was altered, so that the second main (learning) column was headed with a substantially revised statement: "What did you know afterwards, that you did not know before you began this activity?" These packages were sent out in early February 2000, and respondents were again asked to select seven consecutive days in mid-late February for their notations. From this second round, ten completed sets were received (two of the other three teachers having retired in the interim), for a total of 23 sets of weekly diaries from the thirteen respondents.

Table A (Appendix C) provides a lengthy list of attributes of the thirteen Ontario secondary teachers who participated in the diary study - demographic backgounds, and engagement in formal and informal learning activities related to school, home and the community. In addition, this table also provides comparisons with two larger groups of secondary teachers who responded to the questionnaire in the original phase of the study - the overall Ontario group (n = 85), and the Canada-wide group (n = 210). As indicated in this table, In all areas relating to the general evidence of formal and informal learning practices, the reports of the three groups are virtually identical.

Activities Related to Work of Teaching - Given that these diary log forms required specific details for each activity which was being undertaken during each 24 hour period, it was relatively straight forward to develop quite detailed reports and calculations on the kinds and amounts of activities undertaken each day by respondents - whether related to their teaching work, their home and family duties, or other activities. To be sure, some respondents were much more detailed than others in the manner in which they described each activity.7 In some cases, particularly where multiple activities were listed for one time period (eg. "fed children, listened to the news, marked student tests"), judgements were needed to determine whether there might have been a "primary activity," and/or to apportion time allocations for these various activities.

As indicated in Table B, activities directly related to their paid employment were separated into a number of categories (eg. direct teaching, supervision, student counselling, preparation and marking, etc), and quantified. In total, these 13 respondents spent an average of 48.4 hours per week on duties directly related to their paid employment (with a range from 36.6 to 61.1 hours for those weeks reported). Of this total work week, the two most significant aspects were direct student instruction (19.8 hours) and course preparation/marking (17.6 hours). Other aspects, including student and parent counselling, student supervision, student extra-curricular activities, and administration/professional development activities, totalled a further 11.0 hours per week.

Table B - Employment-related Duties (Hours per week)

		Teaching	Supervision	Extra Curricular	Counsel Student/Parent	Course Prep & Marking	Travel on the job	Admin & Prof Activity	Eating on Job	TO
Jane	Nov	20.5	1	----	1.3	13.8	----	1.1	4.1	41.
Barry	Nov	supervision 3.0, travel 1.2, extracurricular 1.4; teaching/counselling/prep/admin=38.8								44.
Barry	Feb	supervision 3; teaching/counselling/preparation/administration = 45.3								48.
Grace	Nov	combined teaching/supervision/counselling/prep = 44.8					0.2	----	2.8	47.
John	Nov	22.6	5.6	----	0.3	11.5	0.6	14.3	----	54.
John	Feb	18.8	0.5	5	1	20.8	----	4.8	----	50.
Jeanne*	Nov	20.7	1.5	0.9	4.4	25.9	----	0.8	2.3	54.
Jeanne	Feb	21.8	0.7	1.3	0.8	20.8	----	1	1.3	46.
Norma	Nov	20.1	2.5	----	3.5	27.2	----	9.5	3.5	66.
Norma	Feb	21	3	----	1.7	16.2	----	4.7	2.9	49.
Ben	Nov	16.9	0.3	----	0.8	10.3	2.3	13.3	5.7	49.
Dan*	Nov	17.3	2	0.6	3.8	31.8	----	1.2	----	56.
Dan*	Feb	22.6	0.6	1.3	1.1	16.6	----	2.3	3.1	47.
Eric	Dec	17.7	1	----	0.6	17.1	----	1.3	5.2	42.
Eric*	Mar	18.7	2.7	----	0.7	18.4	----	4.8	3	48.
Jim	Nov	19.8	1.4	----	1.2	15.5	----	0.5	4.2	42.
Alice*	Nov	18.9	----	----	0.6	12.8	2.7	0.5	1.1	36.
Alice	Feb	21	1.1	7.4	----	5.5	----	2.8	1.5	39.
Robert	Nov	19.1	1.4	13.7	0-.8	21.6	0.1	1	----	57.
Robert	Feb	19.7	0.7	14.2	0.9	22.5	----	3.2	----	61.
Sally	Dec	19.1	0.4	----	1.4	9.4	----	4.1	3	37.
Sally	Feb	20.1	1.4	----	----	17.1	0.7	----	1.3	41.
Total (hrs) # tchr - wks		19.8 N=19	1.7 N=20	7.3 N=9	1.5 N=17	17.6 N=19	0.9 N=7	4.0 N=18	3.0 N=15	48. N=

Notes

a) Pseudonyms used in all cases.

b) Average totals for each of the activities along the bottom row have been calculated using only the number of teachers actually participating in each activity. Therefore, the totals of these individual activities add up to more than the 48.4 hours calculated for the overall average weekly work of these teachers.

c) Nov = third or fourth week in November/1999; Dec = second or third week in December/1999; Feb = last week in February/2000; Mar = last week in March/2000.

d) * denotes Professional Activity Day or sick day that week . In these cases, normal workload determined by taking Mon to Thurs totals where appropriate, multiplying by 5/4, and adding Sat + Sun hours of work.

e) Jane was away from school for much of one reporting week. Therefore this week is not included in this table.

Interestingly, as Table G (Appendix D) suggests, this work load of 48.4 hours per week, based on their daily log sheets, is actually much higher than the average of 41.5 hours which these same thirteen teachers had estimated when completing the questionnaire survey form used in the first phase of this study. 8 Virtually every teacher had significantly underestimated the amount of work they actually did

each week - in two cases, both women with children at home, by 75% and 35% respectively! On this basis, it is interesting to reflect on the results of a number of studies which have recently been undertaken in a number of jurisdictions to assess teacher workload on the basis of similar generalized estimations self-reported by teachers. While they consistently report average work-weeks of 45 to 53 hours, one is left wondering if these are also under-representations of actual work loads for teachers (see, for example, Harvey and Spinney 2000; Alberta Teachers' Association 2000; Statistics Canada 1997; National Centre for Education Statistics (USA)1997; National Union of Teachers 1998). For example, recent analyses undertaken by Milosh Raykov of data from Statistics Canada's General Social Survey suggest that Canadian teachers have the highest weekly workloads, and highest unpaid overtime work, of any professional employee group (Raykov 2001).

These diary-generated workload data suggest that both gender and family status factors interrelated with the overall hours which these teachers devoted to their teaching duties. As shown in Table C, both male and female diarists with no children spent more hours on school work than their counterparts, while (perhaps understandably) women with children at home ranked lowest on this scale, at 42.5 hours per week of direct school-related work.

Table C - Weekly Total Workload Averages, by Gender and Family Status

	No Children		Children at Home	
	Male	Female	Male	Female
Average workload	51.3 hours	52.8 hours	49.2	42.5
Number of Teachers	2	2	5	4

Among many other findings, the diaries indicated clearly that a "normal" 8-5 work day, with time off for lunch, was certainly the exception rather than the rule. Lunches, if they happened at all, were often punctuated with ad hoc calls on their time. Brian's comment seemed to exemplify this situation: "12:10-12:30 - Eating lunch - dealing with students re. co-op application sheets - and with staff - seldom do you ever get to sit down for a sandwich" (28/2). These diaries also indicated clearly that much of the course preparation, and student marking and evaluation work undertaken by these teachers was performed in the evenings and on weekends. As shown in Table D, all respondents found it necessary to undertake such work, and on average, five days of each week were burdened with these extra hours. In total, a weekly average of 10.7 hours of work was undertaken outside of the regular 9 to 5 work day, with a range of 5 to 21 hours. In addition to working at home, during the two reporting weeks several teachers had noted that they had stayed at, or returned to their schools for evening events, including parents' nights and supervising at student dances and sport events.

Table D - School work undertaken during evenings and weekends

Activity (Total participants)		Week in Nov/Dec (range)	N 13	Week in Feb/Mar (range)	N 10	Weekly Average (range)
"Overtime" work, evenings/ wknds (13)	Avrge # days/wk	5.1 days (4 - 7)	12	4.6 days (3 - 6)	10	4.9 days
	Avrge # hrs/wk	11.2 hrs (5 - 21)	12	10 hr (5.5-20.5)	10	10.7 hrs (5 - 21)

Non-Teaching Aspects of Teachers' Lives - Understandably, given that the diary sheets covered all of respondents' waking hours, many other activities in addition to school-related ones were reported - child and elder care, cooking, cleaning, shopping, commuting to work and to other locales, resting, personal care, home repair and renovation, auto maintenance, etc. In addition to these "regular" routines at home and in the community, a number of other activities not only appeared consistently, but in many cases as well, were designated by respondents as having resulted in significant informal learning. For example, virtually all respondents reported engagement in four generic activities - TV/video viewing, reading books/magazines, reading newspapers, and computer/Internet use. In addition, during the two weeks

reported, eight respondents engaged in sessions of physical exercise, and four participated in community volunteer activities (Table E).

Of this group of activities, TV/video viewing most engaged the respondent group, with all 13 indicating more or less involvement.9 On average, viewing took place over approximately 5 days in each of the two weeks, for a total of 9.8 hours per week. Judging from the diaries, the content was fairly evenly balanced between programs which could be considered "entertainment," and programs such as news, documentaries and films. Included in these totals were a number of occasions where respondents would use their evening or weekend hours to pre-view educational documentaries to determine if they were relevant and suitable for including in course material for their classes.

Table E - Weekly "Recreational" Activities of Diarists

Activity (total participants)		Week in Nov/Dec (range, in days)	N 13	Week in Feb/Mar (range, in days)	N 10	Weekly Average (range, in days)
TV/Video viewing at home	Average # days	4.6 days (2 - 7)	12	4.8 days (3 - 7)	10	4.7 days (2 - 7)
	Avge # hrs/week	10.4 hrs (6-24)	12	9.9 hrs (3 - 28)	10	9.8 hours
Home reading (book/magzins) (12)	Average # days	2.0 days (1 - 4)	10	2.8 days (1 - 4)		2.3 days (1 - 4)
	Avge # hrs/week	2.1 hrs (0.5 - 5)	10	3.4 hrs (0.5 - 5)	8	2.7 hrs (0.5 - 5)
Home reading (newspapers) (12)	Average # days	3.3 days (1 - 7)	10	2.5 days (1 - 5)	8	8 2.9 days (1 - 7)
	Avge # hrs/week	2.1 hrs (0.5 - 5)	10	3.4 hrs (0.5 - 5)	8	2.7 hrs (0.5 - 5)
Home computer /Internet use (9)	Average # days	2.4 days (1 - 5)	9	2.5 days (1 - 6)	8	2.5 days (1 - 6)
	Avge # hrs/week	4.4 hrs (1.5 - 14.5)	9	5.0 hr (0.3 - 24)	8	4.7 hrs (0.3 - 24)
Exercising (gym, sport, yoga, etc) (8)	Average # days	3.8 days (3 - 5)	8	2.7 days (1 - 5)	9	3.3 days (1 - 5)
	Avge # hrs/week	5.2 hrs (2.3 - 8.5)	8	3.8 hrs (1 - 8.5)	9	4.6 hrs (1 - 8.5)
Community volunteer work (4)	Average # days	2.2 days (1 - 4)	4	2 days (2)	1	2.2 days (1 - 4)
	Avge # hrs/week	6.2 hrs (2 - 12.5)	4	4 6 hrs (6)	1	6.2 hrs (2 - 12.5)

Computer and Internet use was the second-most engaged-in of these activities, and certainly reflected findings of a recent national survey of the general Canadian public which indicated that teachers had the highest rate of access to computers and the Internet of any occupational groups in the country (Livingstone 1999). Nine of the respondents reported on using computers at home, on average for 2.5 days a week, for 4.7 hours per week. In most cases, computers were used for "school work" - preparing course and lesson materials and tests, writing administrative reports, entering and processing student marks, and e-mailing colleagues and school administrators. Similarly, Internet use was highly related to

searching for course material, books, etc. In addition, one respondent reported using e-mail for corresponding with family members, and another reported significant use of computer and Internet for writing, downloading and exchanging computer programs. In virtually every case, annotations were replete with many comments about the extent to which self-learning was taking place in the context of this computer use - "learned new computer skill" (Jeanne 25/11), "found new reference sites on Internet" (Jeanne 26/11), "learned how to program P.C. to use voice recognition software. This will take some time" (Barry 3/12), and so on.

10 of the 13 respondents also reported that they engaged in substantial reading activities each week. Books and magazines were read on an average of 2.3 days, for a total of 2.7 hours each week, while newspapers were read slightly more often (2.9 days) for slightly less amounts of time (2.3 hours). In addition to general knowledge acquisition, several respondents punctuated their reports with comments about how this reading assisted them directly in their teaching work - articles on recent government, financial, scientific, and other events, fiction and non-fiction reading material for students in language courses, and so on.

Finally, two other activities were also systematically reported upon - physical exercise and community volunteer work - and also engendered comments about their inherent learning aspects. Nine of the 13 teachers indicated participation in physical activity, on average during 3.3 days of each week, for an average engagement of 4.6 hours per week. The physical activities varied considerably - two respondents played hockey with local groups, three reported involvement in regular exercise programs, two engaged in regular lengthy walks or runs, while a number also indicated more ad hoc exercising of various kinds. In relation to community volunteer work, four respondents reported on regular engagement - church committees, community soup kitchen, local sports league and fundraising for a "home for the adult mentally challenged." For one of the two reporting weeks, these activities of the four respondents occurred over 2.2 days, for an average of 6.6 hours; during the second reporting week, only one of the four reported on community engagement, which took up a total of six hours on two occasions that week.

Teachers' Engagement in Formal Learning Activities

During one or two weeks in which logs were kept, nine of the 13 respondents indicated that they had participated in one to three "formal" events - such as workshops, presentations and meetings - which involved new learning. Many of these events occurred at the school, either as after-school gatherings or full professional-development days, and involved a variety of themes relating generally to teaching and learning. For example, one respondent reported that her workshop involved an "interesting seminar on multiple intelligences and new knowledge" (AS 26/11), while a department meeting had consisted of an "update on exemplars, [and an] in-service assessment conference" (AS 1/3). Also during the two weeks in which logs were kept, four respondents each engaged in a program outside of the school - an after-school presentation on family violence issues at the school board offices, an afternoon PD presentation in another school, a curriculum meeting at a resource centre related to developing "a curriculum package for Gr9 course" (JG 1/12), and an overnight conference of six staff members to discuss long-range school planning and programming. Finally, two teachers were engaged in formal ongoing evening courses during the reporting weeks - one teacher who was enrolled, both during the fall and winter terms, in a professional qualifications course in religious education which met one night a week for three hours, and another who participated in a weekly program of Yoga training.

In addition to formal gatherings organized specifically for teachers' "professional development," the diaries also indicated a number of other organized meetings were reported as being sites of learning. These included such events as Barry's "Heads of Dept. Meeting - discussion re partnering with business and social agencies to fund expanded program for adults" (22/11), and Dan's report that he had "Attended staff meeting - teachers were grouped by some apparently random method to develop ideas about the school's 5-year plan. My group was working on the Climate of the school environment" (1/3).

Teachers' Engagement in Informal Learning

Introduction - Even a cursory examination of these diary logs leaves no doubt that all of these 13 teachers saw themselves as on-going learners, both in their paid workplaces and in other sites in which they lived their lives. Given the stated purpose of the study, the wording of the instructions, and the way

in which the response sheet was structured, respondents were, of course, encouraged to report on this aspect of their lives, and prompted to include learning which had taken place during any of the activities in which they had engaged. However, as discussed earlier in this paper, in addition to those learnings which were explicitly noted by each respondent (by describing them as such, and/or placing them in the "learning" column of the log sheet), it quickly became clear in reading these logs that there was a also a number of other activities listed by each respondent during which learning opportunities could reasonably be considered to have taken place - examples such as Eric's report on "Lunch with tech teachers - discussion of effects on tech programs because of G[rade]10 new compulsory 'civics' course" (28/3), or Jim's weekend engagement with "house repair - new masonry cutting tool" (20/11)). While these incidents were not explicitly identified as "learning" per se, it would be difficult to conclude otherwise. (See also, further methodological discussion on this matter in the quantitative analysis section below).

Accordingly, a data analysis protocol was developed, identifying those kinds of generic activities in which new and substantive learning could reasonably be said to have occurred, whether or not it was explicitly identified as such in each case by the respondent. Activities so designated included: informal discussion with colleagues, administrators, students and parents, where the content of the discussion suggested significant acquisition of new knowledge; reading (books, magazines, newspapers, etc), TV, video and computer/Internet engagement for other than entertainment purposes; manual activities involving acquisition of new skills and/or knowledge. Even where respondents declared that learning had taken place, for the purpose of this analysis only that learning which met the protocol guidelines was included in the analysis.10

Quantitative Analysis - As noted above, whether or not learning was explicitly identified/designated by the respondents in the diaries, activities such as engaging in discussions with colleagues about schooling matters were included as informal learning, as was engagement with newspapers, magazines, books and television programs other than those which might reasonably be considered strictly entertainment in nature. Where more than one activity was listed for a specific time period (eg. "read the newspaper and prepared supper"), approximations were made of the amount of time which might have been spent on the explicit "learning" activity. Similarly, value judgements were made about the numerous kinds of activities undertaken (at the workplace, home or elsewhere), and those which implicitly or explicitly indicated or suggested an engagement with activities which probably or definitely lead to new learning were included.

As indicated in Table F, all 13 respondents indicated that they had engaged in significant informal learning during the weeks reported in their diaries. Informal learning related to teaching and schooling took place over an average of 7.0 hours per week, with a range of 0 to 13.8 hours on the part of individual respondents. Similarly, informal learning related to themes other than teaching and schooling averaged 5.7 hours per week, with a range from 0.8 to 29.3 hours.

Table F - Weekly Hours of engagement in Informal Learning (13 Diarists)

	School Related Informal Learning		Other Informal Learning	
	Average	Range	Average	Range
Nov/Dec Diaries	7.4 hrs	0 - 13.8 hrs	5.4 hrs	0.8 - 12.0 hrs
Feb/Mar Diaries	6.4 hrs	0.5 - 11.7 hrs	6.2 hrs	1.5 - 29.3 hrs
All Diaries	7.0 hrs	0 - 13.8 hrs	5.7 hrs	0.8 - 29.3 hrs

Qualitative Analysis - For the purposes of describing the kinds of informal learning in which respondents engaged, this learning has been organized based upon the setting in which it occurred - a) at school; b) with colleagues outside of school time/space; c) home and community.

a) Informal Learning at School - The workplace was a significant site for informal-learning activity. For virtually every respondent, interactions with colleagues constituted the major engagement - in most cases, many times each working day. The content of these discussions ranged widely - from specific

school matters, to more general educational themes, to a wide variety of non-schooling-related issues. However, there was no question that much of this daily informal, and often spontaneous, interaction related directly or indirectly to the acquisition of new information and knowledge about the job at hand. In the words of one teacher, explaining a spontaneous late after-school discussion about upcoming report cards and parent interviews, "Our lunch and after school times are tantamount to dept[ment] meetings" (Eric 29/3).

On the one hand, these discussions often involved the specific issues of the moment. Typical and numerous were reports on information sharing about the interests and needs of students in their charge, such as Alice's "Lunch with colleagues - talked about some students at risk" (2/3), and Dan, who "Talked informally with V[ice] P[rincipal] - picked up from him a few bits of information about students who are having difficulty in my 10g [grade 10, general level] class" (3/3). Equally as numerous were discussions about course and program matters, such as John's report of having "Discussed law program with [student] counsellor" (29/2), and Jim's "discuss[ion of program] problems and how they can be minimized re. failures" (23/11). In this context, there were also a number of examples of respondents assisting colleagues directly with new learning. Jim, for example, was soon to leave the school, and spent much time one afternoon in a collaborative informal learning activity, "instructing teacher who will take my place upon retirement. This will be an ongoing procedure 3-4 times a week during this instructional time" (23/11). Similarly, Eric reported on being in the school's "autoshop helping a colleague use a computer analyser to trouble shoot engine of Dodge van" (15/12).

Also very numerous were reports on discussions relating to schooling issues more broadly. Understandably, given the significant changes being imposed by the provincial government during this time, many of the comments concerned these changes, and how they might affect existing courses and programs, teachers' workload, and the overall welfare of the students. Some reports, such as Eric's "Lunch with colleagues - primarily G[rade] 9 curriculum and its implementation in g[rade] 9 tech[nical subjects]" (14/12) were noted in a fairly neutral manner. Other notations included explicitly stated concerns arising from their new understandings: "Lunch with tech teachers - discussion of affects on tech programs because of G10 new compulsory "civics" course - decimated G10 tech courses" (Eric28/3); "discuss with colleagues Gr 9 material and cuts to Education - discussing how cuts to education will affect our work situation" (Jane 17/11).

Finally, many other "informal learning" reports with colleagues involved themes and issues of more general interest and knowledge, such as Robert, who reported spending "15 minutes in staff room," during which time they discuss[ed the "Nature of Things" program on prosthetics to be shown tonight" (22/11), and Jeanne, who had a "Lunch/Sharing with colleagues - Learned about a couple of Internet sites" (3/3).

In addition to interactions with colleagues, many of the respondents also reported upon informal school learning which occurred for them in the context of their engagement with students, and in some cases, in phone conversations and meetings with their parents. As one respondent put it, these parent interactions provided opportunity for developing "listening skills and experience - not everything in counselling is as it first appears"(Barry 32/11).

b) Informal Learning with Colleagues, Outside of School - In addition to informal learning which took place at the school site, many of the respondents also reported on collegial interactions and related learning away from the school site and outside regular school hours. Sharing rides to and from school was a common venue for such activity. Eric reported that, "On route to work [we] discussed curriculum . . . kids on my course, parent interviews, etc" (14/12), while Jane noted that in "travelling home with colleague - discussed Gr9 poetry and OAC Novel Study" (19/11). Eric also reported on one evening at home, punctuated by "phone call from two colleagues - one off long term illness - other to advise me he will not be at work tomorrow - Thursday - not feeling good. Asks me to help organize lesson plan" (15/12). Even evening and weekend social events seemed to involve discussion and sharing of knowledge and opinions relating to schooling and work. Jane reported on an evening "social; spent time at friends - discussed T[oronto] D[istrict] S[chool] Board budget" (19/11), while Jeanne's "Staff Xmas Curling Tournament and Dinner" included "Informal learning . . with colleagues on Time/Stress Management" (JL 27/11).

c) Informal Learning - Home and Community - In addition to informal learning related directly to schooling matters and themes, most respondents also indicated a number of occasions in which more general kinds of learning had taken place informally, during their evening and weekend activities at home and in the community. In some cases reports were made of new learning taking place during "regular" unpaid household work activities, such as Jim, who tried out a "new stir-fry recipe (21/11), and on another occasion engaged in "house repair [with a] new masonry cutting tool" (20/11). Similarly, Eric, stuck with dealing with a house repair, admitted that "It's been a long time since I worked in construction, so it's always a challenge to problem solve plumbing problems" (25/3).

Other (non-"regular") home activities were also often the source of new learning for our respondents. Computers constituted a major venue for such self-learning - both in relation to the acquisition of new skills and knowledge about the equipment and programs themselves ("help my spouse with computer - learned to format labels" Ben 22/11), as well as using computers and the web to seek out new information on an infinite range of topics ("did my regular search for programming ideas - how to draw a transparent bitmap" (Dan 30/11); "check e-mails and info on school board network" (Ben20/11)). So-called "recreational" activities also served as learning opportunities for a number of respondents - particularly hobbies for respondents such as Jim who, on one occasion, was "preparing photo exhibit for May 2000 - learning framing technique so I can frame all work" (22/11), while on another, was "read[ing]" - learning woodworking projects" (23/11). Barry, by comparison, had taken up teaching himself the art and craft of shoeing horses. Finally, engagement in community activities was also a source of learning for a number of respondents, including community volunteer activities, and a special venue for John, who reported that attendance at church service occasioned significant informal learning for himself - "the minister is a great source of ideas for personal growth. I've learned various public speaking techniques from him" (JG 5/12). Overall then, it is not difficult to conclude that the home and the community both served as important sites for informal learning for our 13 diarists.

PHASE THREE - IN-DEPTH PHONE INTERVIEWS

For the purposes of further exploration of the data provided in the first two phases of the project, four diarists from phase two of the study were randomly sampled by categories of gender and age (male/female; younger/older); when contacted by telephone, all agreed to participate in individual telephone interviews. These interviews, conducted during September of 2000 by one of the authors of the project, ran between 45 and 60 minutes. All were taped and subsequently transcribed.

For the purposes of exploring the ways in which these four interviewees understood and talked about their own formal and informal learning, it is perhaps useful to provide some detail about their individual backgrounds.

> John - In his mid-thirties, John was white, born in Ontario, with English as his only language of proficiency. His spouse also worked full-time outside the home and they had one child under six years of age. John had been teaching for ten years, and at the time of the interview was working in a large composite high school (more than 1000 students) in a small city in the south-west of the province. Although he held the position of assistant head of a department in his school, he also carried a full teaching load of business-related subjects.
>
> Jeanne - Although living and working near a medium sized city in eastern Ontario, Jeanne was born into a French-speaking family in Quebec. She worked full-time, teaching French and Spanish in a small composite high school (under 600 students), and she and her spouse, also employed full-time, supported two pre-school aged children. At the time of the interview she was in her late thirties and had been teaching for over 10 years.
>
> Barry - Like John, Barry was white, Ontario-born with English as his only language. However he was significantly older, in his late forties, and had taught for over 15 years. Their home supported two school-aged children, but unlike the three other respondents, his wife was not employed outside the home. His school, a large composite high school, was located in a small city in the central part of the province, and also like John, he held a

position of department head. However his timetable involved few classroom teaching responsibilities. Rather, his working day consisted mainly of individual counselling sessions with students, dealing with teachers, administration and parents, and administrative work in conjunction with students' timetables, records, assessments, report cards, post-secondary application forms, etc.

Norma - By far the most experienced teacher of the group, Norma, a woman of colour also in her late forties, immigrated more recently to Canada, after teaching for over 20 years in her country of birth. For the past few years she has been teaching a full timetable of science classes in a large academic high school in metropolitan Toronto. Her husband was also employed full-time, but their children were now grown and away from home. In addition to English, she was also fluent in both her mother tongue, and one other regional language.

In summary, there seems to be a clear picture of both similarities and differences among the demographics of these four respondents. On the one hand, there is was a balance of gender, and a significant range of birth places, first languages, ages, academic backgrounds, geographic residence and teaching experiences. However, all four were similar in that they all lived with heterosexual partners (all of whom had themselves completed post-secondary studies, including two who held masters' degrees), all were raising children, all were employed full-time as teachers, all were university graduates, and with the exception of John, all had also completed masters' degrees.

Other.information, gleaned from their questionnaire responses and diaries completed earlier, also indicated both similarity and difference in regard to their daily and weekly routines, particularly in regard to their attachment to various forms of media. All four had indicated that they kept abreast of the news daily, although there seemed to be distinct differences in the manner in which each accessed this information, as only John and Norma stated they subscribed to and read a newspaper daily. Their own perceptions of the amount of time spent viewing television varied considerably - Barry claimed between two and five hours daily, Jeanne and John each reported spending from one to two hours, while Norma stated that she "rarely'" engaged the medium. Both females reported a daily routine of reading a book outside of the workplace, while both males read "less than once a week." In addition, Barry was the only respondent of the four who reported that he did not "buy or subscribe to any other types of newspapers, magazines or newsletters." Interestingly, he was also the only one who did not have a computer in his own home, while the other three each reported spending approximately five hours per week at home on theirs. In addition, John and Norma had Internet access in their homes, and spent a further four and five hours respectively in that medium each week.

In order to provide a framework for exploring issues of learning with these four teachers, the interview questions were based on events which had occurred in Ontario during the previous three years - the provincial government's enactment of sweeping changes to the province's school system. Among many changes affecting secondary schools, teachers and students, the following reforms were referenced during the interviews: a) the complete revision of syllabi and all courses for secondary schools in the province; b) preliminary introduction of a new compulsory, standardized student assessment process, including revised standardized report cards; c) introduction of provincial regulation requiring mandatory teacher involvement in student extra-curricular activities; d) establishment of a provincial statutory body to control teacher selection, training, examining, certification , registration, standards of practice, professional development and discipline; and, e) an earlier, and short-lived, provincial government initiative to de-stream grade nine programs in the high school system. In many respects, these government reforms served as a useful medium for exploring issues of teacher learning - they were universally applied across the province, and certainly well-known to all teachers (and, as noted earlier, occasioned much collective reaction from teachers).

After some preliminary opening questions, interviewees were asked to identify one or more provincial government reform measures which they felt was particularly notable - if none came spontaneously to mind, then the four were mentioned and the respondent asked to select one. They were asked first to explain their understanding of these reforms, and then to reflect on the ways in which they themselves had come to learn about these initiatives. Subsequently, they were also asked to explore how it might have been that their colleagues in their respective schools came to be knowledgeable about, and engaged

in, these initiatives. During this part of the interview there was considerable prompting to elicit reflections on ways in which learning may have taken place - "formal" opportunities such as workshops, meetings, presentations, circulars, and school announcements, as well as the more informal discussions among teachers, administrators, students and parents. In particular, interviewees were asked to comment on how the opinions of colleagues about these reform initiatives were being expressed and exchanged, and particularly the ways in which teachers were attempting to learn about, understand, and/or conjecture about what these reforms might mean in relation to change in the school and classroom - curriculum, materials and teaching practice, as well as the overall effects on students themselves.

Findings and Analysis

Introduction - Overall, the transcripts of the four extended telephone interviews have provided penetrating insights into the ways in which these four teachers have engaged in their own learning during recent months. The decision to use the recent massive and controversial provincial government reform initiatives as the basis for exploring these modes and levels of learning was a propitious one, as these reforms were certainly central to, and very much affected their work during this time period, and thus were much in their minds. In addition to reflecting on their own learning practices, these respondents were also asked to reflect on the ways in which their colleagues in their respective schools might also have come to learn about these reform measures, before and/or during the time they were being introduced.

Given the controversial nature of many of these reforms, and the fact that they were introduced with little or no official collaboration with teachers in the province, it is not surprising that the discourse of these respondents also included much comment about the reforms themselves - their observations and judgements (largely negative), both about the substance of these initiatives and the ways in which they were being implemented. (Indeed, on many occasions it was necessary to interrupt lengthy harangues in order to steer the interview back to reflections on the ways in which their own learnings on these matters had occurred.) Given this import, it is perhaps useful to describe briefly the observations of these four respondents, both on the substance of the reforms and the manner in which they were being implemented.

Because these interviews were conducted during the first month of the school year in which the new programs, courses and assessment and reporting procedures were required to be implemented in every high school in the province, it was not surprising that much of the interview time was taken up with respondents' comments on these particular reforms. In relation to the actual substance of the new courses of study, opinions of the four respondents were actually quite mixed. On the one hand Norma, for example, was seemingly quite enthraled with the new, more student-hands-on approach to the chemistry courses for which she was responsible, and looked forward to "teaching a new curriculum." Comments from two others seemed somewhat more circumspect. Barry, the guidance head, thought that "from my perspective the new curriculum is not bad," while Jeanne noted that "we all see some positives in the new program, there are certainly some improvements." John, by comparison, did have substantive concerns about some of the content and direction of the new business education courses being mandated for his area, such as some of the basic skills which, he claimed, were being downplayed or ignored in the new program.

As John noted, "I don't see anyone that says, 'wow, what a great thing.'" John's perception about the opinions of his colleagues on the new curriculum reforms was certainly reinforced by the three other respondents. All four were very clear that their respective colleagues were very divided in their comments and beliefs. John's overview certainly resonated closely with that of Jeanne's, who summed up her observations of her colleagues' opinions with "Well, to be honest with you, I haven't heard a lot of positive comments that weren't really coaxed, you know what I mean?" Similarly, Norma noted that "the opinions are divided because a lot of teachers . . . they are to a certain extent, you know, disgusted with it [the new chemistry program]." Barry as well, in spite of his own view that the new curriculum "is not bad," was quick to note that, as a member of the school staff, he had to admit that overall "we're not comfortable with that [new curriculum]." However, with the exception of John's comments above, and similar concerns which both he and Jeanne voiced about the some of the new directions being taken in assessing students, there were few comments in the transcripts about specific substantive concerns which they or their colleagues may have had with the new curriculum. (This may be largely due to the

fact that these matters were not the prime focus for these interviews, and were not explicitly part of the interview protocol).

Overall, the respondents and their colleagues held varying views on the substance of the new curricular reforms. However, there is no question that every respondent, as well as virtually all of their colleagues about whom they spoke, were very concerned with the manner and inordinate haste in which these new programs and courses, along with the new assessment and reporting procedures, were required to be implemented. These concerns ranged across a number of major issues, including lack of general and specific information about the changes, the lack of resources and materials, the late or non-appearance of the required new text books for all courses, and the perceived lack of support staff and procedures at all levels to assist in the interpretation and implementation of the reforms. Ironically however, in relation to the overall purposes of this study, this lack of outside information and support clearly resulted in an inordinate amount of informally organized, individual and collective learning, which will be reported in the next sections.

In relation to the other two mandated reforms which were covered in these interviews - compulsory extra-curricular duties and a new statutory body to control teacher certification and practice - there is no question that all four respondents, and virtually all of their colleagues whom they referenced in the interviews, were seriously opposed to the manner in which they were implemented, to the substance of the reforms themselves, and also to what these specific changes meant in the larger social and historical context for teachers, teaching and schooling in the province. In reference to the newly legislated extra-curricular obligations, John's perspectives on changes in teachers' status - "We are being totally deprofessionalized" - certainly paralleled Norma's views on teachers' position in overall employee/class stratification schema.

> No one wants [compulsory extra-curricular duties] - you know, when you're doing something, you're doing it with love. When it's forced down on you . . . you're talking to people who have qualified, who have intelligent minds.

Overall, it is clear that these government-mandated schooling reforms required a significant amount of new learning by teachers in the province. We will look at the kinds of learning which the respondents reported on, and the ways in which these learnings took place.

Participation in Formal Learning Activity Within the School - In spite of the enormity of these curricular, assessment and reporting changes, all four teachers' interviews suggest that there was very limited, if any, formal opportunity to learn about these changes and what was required to implement them. Only two of the four respondents, for example, could recall any in-school staff meetings which had been organized specifically to deal with curriculum and reform - one such event for each. In Jeanne's case, "the only formal session I've had was given by one of our teachers at school last year about evaluation and the new curriculum, but that's the only formal training I've received." John reported that his only formal meeting "was one on teacher advisory groups - [they] shortened the teaching day and extended the period of [workshop] time so we could learn how to do teacher advisory groups."11 Otherwise, reference to these reforms at formal staff gatherings seemed to consist only of announcements, such as Jeanne's summary that "it was all just documents received. Like our [team] leader said, they are now available in the office and the consultant, and he's there if I have questions."12

In the context of their responsibilities as school department administrators, both John and Barry also reported on learning which had occurred as a result of being involved in meetings with other school administrators, held either in or outside the school. In some cases these were meetings to receive information about impending changes, and in other cases they were meetings with other school administrators to plan for these changes. John reported on participation in only one such event. "Well, I might be in a different spot than most. I represented the board at the provincial meeting of the Ontario business education coordinators and so I'd heard of this probably a couple of years before it was even on the table." In Barry's situation, being the head of the guidance department required his presence at several meetings with administrators of his own school, in order to plan for and monitor the introduction of the reforms at his workplace. Interestingly enough, he himself viewed these sessions as being largely

administrative in nature, rather than being of a "professional" nature, although it is difficult to imagine considerable learning not taking place during these moments.

> We met today. We're looking at, you know, assessment. So I guess I can be part of kind of modelling some kind of assessment practices that we have with the staff. But nothing that I would count as, what you and I probably know as professional development or anything

In addition Barry also participated in informational "downloading" meetings with other school guidance department heads in the region, held either during or after school hours.

> And the board, I think, does a relatively good job in informing us [guidance department heads] through Ministry representatives and board reps - but that's at the expense of class time and that had to change this year as well. So we're meeting after school. but prior to that we would meet probably, I would say the majority of about one day a month and that's where a lot of this downloading of information would come. And then we were expected to get back and inform. Sometimes we would get the information before the principals and we would try and divvy it up through the staff.

However, when asked what opportunities other staff members in his school had had to participate in formal sessions regarding the impending curriculum and assessment reforms, Barry's perceptions were much bleaker.

> I doubt if it was that much. I mean, we would give them, you know, a copy of what's coming up and the expectations of it . . . um, but there were many many times when they would come in and, "what does this mean? what does that mean?" I thought we did a fairly good job in ,you know, the information on paper, um, but . . .

When asked why there was not more opportunity for formal sessions with teachers in his school, Barry returned to the issue to which he alluded in his initial comments - lack of resources, time and official commitment for such activity.

> The first time we went through that, in Guidance, we took it upon ourselves to do a lot of in-servicing with students and the staff. But, it came down to a timing issue. There's not enough time going around for anybody - It was essentially, 'here's the dates [for implementation]. Here's how to do it.' Kind of fudge through it for the first time through. . .We tried to do it, uh, through . . . a concerted effort in some ways to free up the students on various themes and that would then free up the staff so we might have forty minutes here or there, and it worked for a while but then it just sort of disintegrated because it just became overwhelming . . . it came out a logistics nightmare . . .so, uh, I don't think we really got a handle on it. and I would guess that we're probably just an average kind of example of what's going on out there.

In short, as Barry noted, the entire curriculum assessment process for teachers in his school "just kind of fell in their laps."

Given his role as assistant department head, John was also involved in a materials circulation project - receiving print materials from the Ministry of Education, and then distributing them to specific subject teachers, in his case, across all schools in his board of education.

> I did the Ministry presentations. I would sit and learn. For instance I learned the grade nine and ten course in workshops. I would get the summary report and then I would have to report back to all the business teachers in our board, and some of them were very happy to

get the resources.

Overall however, the situation for all-teacher access to formal learning at John's school seemed to be very similar to that of the other three schools being reported on - in his case, only one school-wide meeting on the subject of schooling reforms. As he frustratingly noted, the official approach to these reforms seemed to be

> Here's the change. Do it! And there's really little in-service. I don't want to sound too cynical but I know in our board, um, and we've had the education improvement commission come in here and talk about the issue of communication. So, uh, they don't communicate, what they'll do is, you'll get memos stating that there's all this in-service available but the in-service never comes.

Given the overall import of the comments, it would appear that there was little formal opportunity - certainly much less than appears to be desired - for learning about these major curricular reforms, for these four teachers, and perhaps many of their colleagues in at least these four specific workplaces.

Participation in Formal Learning Activity Outside the School - As a result of direct questioning during the interviews, two respondents also described formal workshops held outside the school, which touched on specific aspects of the province's curriculum and assessment reform project. Norma explained that she had first heard about these proposed curricular changes "maybe a year and a half ago when I went for . . . one of these seminars, it was last summer I went to an associate teacher [seminar] which spoke about that." During the following summer, she also participated in a science curriculum workshop organized and "conducted by the teachers themselves in order to bring new and experienced teachers together.13 As she explained, the emphasis was on "working out different strategies. How to make these topics to be easily understood by the students," and in conjunction with this seminar she had received "a lot of useful literature."

In Jeanne's case, while not noting any formal learning activity outside of school, she did report that a colleague in her school attended a workshop in the summer, for instruction on a new computer-based program for assisting teachers in recording and processing student grades ("Mark Book 2000"), which, she noted, she herself would very much like to have taken. Whether or not representative of other teachers in the province, she indicated strong interest in participating in this mode of formal learning, and was quite frank about what she saw as a responsibility and a failing of the school to inform teachers about the existence of such courses. "It's very much, how can I say, left to luck. Will I come across this [any] program? I don't remember [ever] seeing a memo in my box that says, 'new program available for new curriculum.'"

Informal Learning Activity among Teachers

Introduction - Overall then, it would appear that in these four cases a least, there seemed to be little formal opportunity available to teachers to engage in learning about the new provincial reforms. Given this dearth, and the immensity and significance of these changes which were imposed on all Ontario schools, it is not surprising that these interviews indicated that an immense amount of informal learning had been taking place - not only with these four respondents, but also, to the extent that their observations are valid, with many or all of their colleagues as well.

This informal learning about the reforms took place in a number of ways, individually and collectively, and involved print materials, television and video, computers and the Internet, and discussions with others. While virtually all of these learning activities were intentioned by those involved, they occurred in a number of circumstances - from a long-planned-for evening of reading documents, to both planned-for and spontaneous meetings with one or two colleagues between classes, at lunch time and before and after regular timetabled work hours. Each of these modes will be addressed to some extent in the following sections.

Engagement in Print Materials - All four respondents reported on significant involvement in the reading of print materials related to the province's schooling reforms - both their own involvement and that of their colleagues. As noted already, much of the official information concerning the mandated changes was issued as reports, syllabi, guidelines, course profiles, booklets, memos, etc. For many teachers, judging from the comments of the four respondents, these texts (to the extent they were available) turned out to be the main, if not sole, source of direct information. Jeanne, for example, talked about spending one month of her summer holidays reading all of the relevant guidelines and profiles she could obtain, and all of the other respondents similarly reported on such activity.

Interestingly, more than one respondent commented on how this individualized approach to learning about, and working on, the new mandated curriculum and assessment programs constituted a dramatic shift from what had been the earlier mode - one of a more engaged, collective activity involving a number of colleagues. Barry remarked on this new phenomenon, in the context of having to develop a new course of study for his guidance program.

> From my perspective the new curriculum is not bad, it's just overwhelming when you stack it up against everything else. Now this year when I'm actually going to end up teaching one aspect of the guidance course, I've been dabbling in writing that over the summer and it's, uh, ...it's a lot to ask teachers to do that. I mean, when we used to have writing teams . . . you were therefore expected to teach it from kind of a school point of view. Now the whole thing is shifted to Toronto of course - and, you know, you have to break down the profiles and you have to work on the expectations and all that kind of stuff. It's confusing and it's difficult to do and I think that's probably a new additional burden right at the classroom level where the classroom teachers that are expected to go through all that - yeah, to go from there and to go forward. And in my case I didn't even have...I didn't have text books. I didn't have anything until four or five days before we were going to go.

Similarly, John noted that these recent schooling reforms had also meant significant change, not only in the nature of his work, but a distinct change from earlier times when professional development, in-service training and curriculum development involved a more formal, organized, collective way of learning. Now,

> primarily you're on your own, if you need to figure stuff out you . . and again, I don't have a lot of problems with that, as long as the resources are available, the materials, I don't mind doing the self-teaching thing. ... It's a gradual process trying to get your head around that because you're so accustomed to doing it the other way.

Informal Discussions with Colleagues - In some respects at least, it would appear that by far the most significant source of learning for all of the respondents interviewed (and, it would seem, for virtually all of their colleagues as well) was that of informal interactions with their colleagues. For example, although Jeanne had reported that she had devoted a significant part of her holidays to reading government publications, she was quick to note that while "the official documents are the basis for our discussion, . . . the document doesn't tell me a lot of details, doesn't give me a lot of information, and I do have to go to someone else to find out." One of several examples she gave occurred when she was attempting to understand the new requirements for assessing students in her program.

> Right now also I feel I'm learning a lot informally regarding the new curriculum - just by sharing with my colleagues. When I was making the new rubric . . I went to my colleague from the English department who has basically the same kind of program, a language program, and so I asked her advice on what she does . . . and we discussed it and I was able to come to a better understanding. So that's the way we do it, just by discussing in the staff room.

Computer/Internet-based Informal Learning - In addition to print materials, all four respondents also reported on their use of computers and the Internet to access information and programs directly and indirectly related to the schooling reforms being introduced. In some cases, this use involved simply the downloading of text materials which were not otherwise easily available, for subsequent reading. In many other cases, however, the computer was used more significantly to engage in learning about specific programs. For John, this new approach of self-learning involved a number of approaches, including

> a lot of work just on the Internet basically. I mean, that's helpful. I much rather learn, sort of, when I have the time and the more stuff that's posted on the Internet, the better. And I'm finding some stuff, like, on the educational network of Ontario. I mean, just having the course profiles on-line is very helpful too.

Jeanne as well reported on significant computer use, even though she was also frank about the challenges which she herself faced in dealing with this medium.

> Well like I said, a lot of sharing among us, and myself I find I'm doing a lot of informal learning on the computer, tons of it. . . . for instance [there] is a program that's offered that has the four areas, and so on, and I downloaded it on my computer, well with my husband's help because also all that stuff is informal learning - the husband even helps - and I realized how complex the program was. I couldn't make it work by myself.

New Informal Learning Involving Other Individuals - For several of the respondents, access to information, ideas and support for the new programs came also from outside the school, in the larger community. In addition to Jeanne's home-based teaching assistant, John, for example, described the work he was doing on developing a new legal studies program, which would include student "job shadowing . . . and having a lot of people coming into the classroom to help provide the program." In the context of conceptualizing and planning this program, he reported that he had engaged in discussion with a number of community personnel - "a judge a couple of times, a police officer, lawyers."

SCHOOLING REFORM AND INFORMAL LEARNING - A SUMMARY REVIEW

Introduction - In studying teachers' learning, and particularly the impact which these particular schooling reforms have had on teachers, it is certainly intriguing to glean from their own interview statements, the ways in which all four respondents have had to reassess and re-evaluate, not only their knowledge and beliefs about the specific aspects of their work, but also the overall contexts in which they worked. Indeed, an important impact of this new learning was the way in which these respondents came to recognize and understand that their own identities and social relations - with employers, government, students, parents and the "public" - were continually being shaped and reshaped. Several references were made to the acquisition of new understandings relating to broad schooling themes such as parent-teachers relations, and the role of teacher unions. However, the schooling issue which clearly evoked the most observations and comments throughout all of the interviews related directly or indirectly to professionalism. Directly as a result of the government reform agenda to which they were being subjected, teachers were undergoing active and critical engagement with the (clearly shifting) meanings of being called "a professional." In this final section of this paper, we will attempt to examine and analyze these changing understandings; in this context we will begin by examining and drawing on the findings of a related study, undertaken by Andrew Gitlin and Frank Margonis (1995) in the USA.

Like many other researchers, Gitlin and Margonis had witnessed many schooling reform initiatives over the years, and noted that many turned out to be relatively unsuccessful in achieving their prescribed aims. More particularly, they were intrigued by the ways in which teachers often came to be blamed for these failures. In the reports reviewing these (failed) reforms, teachers were often portrayed as being covertly resistant or openly opposed to change, either because of harbouring traditional views of

education, or simply because of their purported laziness and/or obstinacy. Gitlin and Margonis believed that there may well have been other reasons for these reforms not being successful, based on their belief that, in most of these circumstances teachers did, in fact, engage in a learning process around the proposed reforms. Based on this learning, they conjectured, teachers made informed decisions about whether or not the reforms in question were ones which would enhance student learning overall.

Gitlin and Margonis began their study by examining what are often referred to in the literature as the "two waves"14 of schooling improvement/reform initiatives, and they explored in particular the ways in which teachers were identified in this corpus. "First wave" reformers are seen as those who are

> centrally concerned with the influence of particular variables, such as the use of outside assistance, upon the success of reform initiatives. Successful reforms, they argue, overcome initial teacher resistance by providing sufficient support from outside consultants; the result is practitioners who are engaged and committed to the goals of the reform process (p.378).

By comparison, "second wave" reformers are seen as being (comparatively, at least) more sensitive to teachers, schools and school cultures, and therefore "focus on ways that the culture of teaching enables or limits the reform process." In the (seemingly sympathetic) words of one such "second wave" reformer, voiced in the context of critiquing his predecessors, "There was little sensitivity to the plight of the teachers - they were being asked to learn procedures, vocabulary, and concepts that were not only new but likely to conflict with highly overlearned attitudes and ways of thinking" (p.379).

However, from close readings of their scripts, it was clear to Gitlin and Moralis that both schooling reform groups are similar in a number of ways, and perhaps most importantly in regards to how they view teachers. To a great extent, both groups seem to concur with the general belief, as exemplified by studies such as Lortie's (1975), that most teachers are basically conservative, presentist, individualistic and "oversensitive to criticism." Not surprisingly then, the ways in which both groups of schooling reformers prescribe change reflect these beliefs, albeit expressed in different ways. Quoting directly from the writings of first wave reformers, Gitlin and Margonis note that school administrators are pushed to effect changes by

> "mak[ing] strong demands on the users" through "benevolently authoritarian forms of management" that create the need for teachers "to swim in new waters." At the same time, administrators need to provide significant assistance from outside consultants and other "change agents" to help teachers begin to master the new innovations. By forcing teachers to put forth a great deal of effort, these researchers claim that teachers will develop commitment for the reform, and "accept it and even like it" (p.383).

On the surface, second wave reformers seem somewhat different in their approach to dealing with teachers. Rather than appearing "benevolently authoritarian," this latter group tends to stress "engagement" with teachers through so-called "collaboration" - developing "collaborative school cultures" which, they claim, will help overcome the purported "isolation and alienation of teachers, making teachers more receptive to and engaged with educational reform." In the words of one such reformer, "the core problem is that education as it is now practiced does not engage students, teachers, parents and administrators" (p.380). To counteract this void, school collaboration is seen as "a guiding approach for education reform" (p.383).

In the final analysis however, Gitlin and Moralis suggest there are fundamental similarities in the approaches of schooling reformers from both "waves." In both cases, changes are initiated and instituted from the outside, from top-down, and are designed to be implemented and monitored through the existing authority structures of the institution. For both "waves," teacher resistance and opposition is to be overcome (one way or the other) and the change process is to move ahead.

What is not present, argue Gitlin and Margonis, is any deep understanding or recognition of "teachers'

knowledge" - teachers' deep understanding of schooling cultures and authority relations, the material conditions of work in their schools, and the nature, effects and outcomes of earlier attempts at change in their schools. Concerns raised by teachers about proposed changes are often viewed as representing an "habitual and emotional" attachment to traditional schooling routines, rather than ones engendered by reasoned analysis based upon their intimate knowledge of schooling. Overall there is a lack of any real understanding on the part of school reformers about the ways in which reform initiatives are taken up and analysed by teachers, and thus these reformers harbour considerable misunderstanding about reasons why teachers might seem unmotivated by specific externally-initiated calls for change, and even challenge and/or resist such changes on occasion.

As further theoretical support for this position, Gitlin and Margonis also draw on theories of resistance developed by Paul Willis (1977) and others, to suggest that resistance (whether practiced by teachers or students) "is a political act that reflects an understanding of the hidden implications of schooling." To be sure, in some circumstances this knowledge and understanding cannot always "be fully articulated by the actors," and as Gitlin and Margonis note, in relation to teachers' responses to top-down imposition of reforms,

> the meaning of resistant acts . . . is likely to remain ambiguous. On the one hand, resistance may be nothing more than laziness or an excuse of some kind; on the other hand, it can reflect important political insights. [However,] this ambiguity is used by school change researchers to discount resistance (p.392).

Schooling reform initiatives often fail because educational reformers and school administrators fail to understand and incorporate the "good sense" of classroom teachers into their reform projects. In addition, in most if not all cases, important issues relating to existing authority relations in the school are definitively not part of the reform agenda - or even taken into consideration as a potential factor in determining the success of the proposed project.

> The pragmatic acceptance of school hierarchies in the school change literature reinforces the prevalent tendency to define teachers' resistant acts as unreasonable and obstructionist. It is ironic that overlooking these potential insights leads to a re-enactment of the push-pull cycle school change researchers hope to overcome. Thus, while resistant acts are likely to be ambiguous, they should not be immediately disregarded. They can direct our attention beyond the limits of the school change discourse to the fundamental institutional relations and school structures that help define relationships, roles, and the nature of teachers' work. Resistance can signify a political form of good sense (p.393).

Gitlin and Margonis' empirical work for this study involved two aspects. First, they undertook a detailed examination of attempted changes in structures and accountability which had occurred in a particular school district over several years, and found (among other things) that these events had increased both bureaucratic relations, and workloads, for teachers. Secondly, they engaged in an ambitious program of interviews and ethnographic observations with teachers and administrators in one particular school in this same district, during the time when a specific change initiative was being implemented. In many cases they found active opposition and resistance from teachers to what was being proposed and implemented. Based on these observations and follow-up interviews they concluded that teachers had, in fact, largely responded to this reform initiative on the basis of their knowledge of the existent material, social and authority relations in the school and district, and of the effects of earlier attempts by the district to induce top-down changes and reforms. Like Willis, they also found that among teachers interviewed there were those who could not always "fully articulate" these understandings. However, they concluded from this study that the earlier learning processes undergone by the teachers had certainly been both extensive and deep, and that their position on the current reform initiative was developed rationally through an intensive learning process.

In many ways, the reforms occurring in Ontario schools at the present time clearly fit the "first wave"

model being described here - direct government imposition, with the clear requirement that teachers "swim in new waters." Similarly, based upon a number of comments from the four respondents, there certainly seemed to be significant resistance to these reforms (often detailed as that being undertaken by their colleagues, if not their own doing), and their comments seemed to suggest two main reasons for this resistance and opposition. For some, the concerns were very specific - teachers who, in spite of the new course outlines, stated that they were not going to drop specific components of the previous versions, because they believed strongly that these learning aspects were still important for students. In the words of one of the respondents, "I think in our area, the ones that are not complying. It comes down to them just not agreeing with the [specific] change."

For other teachers however, concern and resistance seemed to stem from more deeply held - but perhaps less clearly explained - understandings, both about the purposes and the effects of these kinds of highly-publicized government-mandated reforms. In fact, many teachers had experienced an earlier, and significant set of province-wide curricular reforms - the destreaming of the grade nine program, and the introduction of a "common curriculum" for that level. This program was barely in place before it was quickly and completely annulled following an electoral change-over to the present provincial government. As one respondent explained,

> the feeling seems to be amongst senior teachers that it's just another bandwagon and that in four years we're probably going to have to do it all over again, so let's adapt what we have, as opposed to starting from scratch. And there's a lot of unsatisfied people with the fact that, yeah, we have to redo all this.15

Similarly, another respondent also mentioned these "change cycles" in the context of the overall "politics now. You know, the new is better than the last one, is better than the - that gets kind of tiresome as well . . ." Overall, it would appear that the engagement of these teachers in coming to learn about, and respond to, the Ontario reforms is not an isolated one, but seems to reflect closely the events reported by Gitlin and Moralis for a similar situation.

"Re-learning Professionalism" A major area of new re/learning for all four interviewees, clearly identified from the interview transcripts, involved their new understandings about the complexities of "professionalism." Judging from their comments, one could almost suggest that they, and perhaps many of their colleagues, had undergone something of a "crash course" of new learning about the overall nature of being a teacher in Ontario - in particular, the ways in which "professionalism" interacts with teachers' work process, the legitimacy of teachers' "professional knowledge," teachers' identity, and the nature of teachers' relations with the larger community.

Indeed, the nature of this recent experience suggests (once again) that the traditional, shallow functionalist definitions of "professionalism" - authority over occupational knowledge and practice, autonomy of practice in the workplace, etc - are even less applicable than they ever were. By comparison, the alternative understandings of "professionalism" posed by stratification and conflict theorists - an historical and ever-changing set of authority relations ultimately determined by government for specific purposes - continue to be as useful as they ever were. While none of the four respondents may have discussed their understandings of "professionalism" in these terms, it is clear from the many ways in which they explicitly and implicitly spoke in their interviews, that their understandings of their identity and status as teachers were not only in the forefront of their minds, but also that they were much shaken by these recent events.

While the actual term "professional" was used by only two of the four respondents,16 there are a number of different aspects of the concept which appeared in all four of the interview discussions. As noted earlier in this article, John used the term in its "occupational status" meaning, discussing his response to the provincial government's imposition of mandatory teacher involvement in unpaid, extra-curricular activities - "we are being totally deprofessionalized." While not actually using the term, Norma also invoked what she clearly believed should be teachers' special occupational status, in commenting on this extra work being "forced" on them. Teachers were, for her, clearly a special group - those "who have qualified, who have intelligent minds." Both of these respondents clearly carried a specific view of

teacher status, but one which, based on this recent experience, seemed to be somewhat or considerably in flux, as a direct result of government intervention.

Two other central aspects encompassed in the traditional meanings of professionalism - the legitimacy of knowledge and the integrity of work practice - were also seen as being highly compromised through the government's unilateral exercise of power. As already noted, several concerns were raised about the nature of both new courses and the new assessment and reporting requirements - their structure and content, as well as the manner in which they were being introduced. In each case, it was clear that teachers' knowledge and perspectives on these important matters had not been consulted, and were being ignored even in cases where strenuous objections were being voiced. In addition, at least two respondents raised substantive curricular concerns about the new, government-mandated textbooks which were being produced and disseminated. Norma, for example, appeared quite perturbed in this regard - both about the quality of the texts as well as what she perceived as a total lack of involvement of classroom teachers in their development.

> When the government or anyone who does unilateral decisions and they don't include . . the people who are going to be affected are not included . . . I mean, people don't know how text books are written. They're written so far above the knowledge level . . . existing knowledge level of the students. . . . it's not the work alone. It's how am I being able to be an effective teacher? I am not delivering that good . . .I am not an effective teacher . . .

As Norma's comments suggest, a fourth core aspect of (traditional) "professionalism" - individual and collective responsibility to students, colleagues, parents and the larger community - was also very much at issue for the interviewees. Jeanne was particularly explicit in her beliefs about this issue, and used the term "professional" more than once to explain her obligations in this regard. When initially asked in the interview about her understanding of the new schooling initiatives, she responded that "The government has a new reform, so it's my responsibility as a professional to make myself knowledgeable of what the reform is all about." As a result, she explained that she had engaged in considerable "professional reading . . . [in order to] make sure that I'm abreast to these changes" - both ministry documents and related material. However, this sense of occupational responsibility in the context of these schooling reforms seemed to turn out to be very much a two-edged sword for Jeanne. As she explained,

> the feeling is also that it [the reform] was done very quickly, and that there were some big mistakes made on the part of the government . . . and we had reaction from parents and students. They don't like it . . . and then we end up with having to defend the mistake, and saying 'yeah we would prefer to say [that as well]' . . . and so there was a lot of dissatisfaction there among the parents, and so we took a bit of the slack for that, and a lot of teachers don't like that of course, 'don't shoot the messenger' - that idea.

In this context, it is interesting to note the numerous comments of the respondents in regards to the conflict which many teachers suffered, in trying to decide how to respond to these new learnings - in short, whether or not to comply with various of these new government regulations which they believed were fundamentally wrong for their students and for schooling generally. On the one hand, it certainly seems clear from these reports that virtually all of the teachers being reported on, took very seriously their "professional" responsibilities as being the source and purveyor of important occupational knowledge, understanding and obligation concerning teaching and learning. At the same time, they were certainly cognizant of the possible ramifications for themselves, and their colleagues, were they to knowingly refuse to comply with these edicts. In fact, more than one respondent alluded to the clear statements made by the government in this regard. John noted, for example, that as compared to previous government reforms, where teachers felt they had some space to shape changes in ways they thought best, "this time there's more attitude, just by the nature of the government, and when it says it's going to do, there are more people complying, and a lot of it, some of it's out of fear. It's a lot more, 'cover yourself.'" This was especially true, John observed, in the core academic areas, where teachers were finding "a whole lot more pressure on them. They're really under the microscope as far as they

perform, so they're probably complying more than those of us in the [other subject] areas." Clearly, these teachers were very cognizant of the powers of surveillance and accountability which could be applied through standardized student testing in the core subjects.

In this regard, more than one of the respondents also commented on what they saw as the age of teachers being a relevant factor in regards to their willingness to comply with changes that they believed to be unwise. In both cases, older teachers were seen as being less willing to compromise. However, contrary to the common stereotype that older people are more intractable, or just simply unmotivated to change, both of these respondents seemed pose different, and more principled reasons. Norma, for example, explained that one of her colleagues was about to retire, suggesting that he was quite pleased "not [to be] in the thick of things" and forced to comply with the specific changes. John's take on the issue was similar, depicting older teachers as being more principled about their work.

> I mean, the age thing happens too. There are a lot more older teachers that will stick up for themselves. In ------ there's a lot of younger ones and, uh, . . . very conservative. I'm a traditional Progressive Conservative [party] voter myself, but these people are, "oh well, if my boss tells me to do it, I got to do it.

Finally, in the context of new overall, informal learning for these teachers (and in the context of their discourse on "professionalism"), it is also interesting to note that all four respondents provided unprompted comment about the role and activity of their respective unions in regard to these government reforms.17 John's comments seemed particularly noteworthy in this regard, particularly since he had already identified himself (as in his comments directly above), as being at least somewhat on the conservative side of things. In fact, he began his response to the government's extra-curricular work regulation by stating,

> uh, I mean, this is funny. I never used to, I learned business management. I'm not a prototypical union person, but, uh, given the way it is now, I'm certainly . . . not that I like what the union does all the time. I'm certainly . . . I see the necessity of it and they're fighting . . . trying to fight on our behalf. This whole, the extra-curricular is just offensive.

His understandings about the role of unions also seemed to have been further developed by the events which were taking place.

> Teachers are terribly demoralized by both [reforms] because basically they see . . . public education deteriorating. I mean, the other thing too is that it's not the union - which is the way the government paints it, they always say 'oh, it's the union that's telling them' - It's like, no, the teachers are really saying their thing. It's really hurting the quality.

Similarly, the other three respondents also commented on their engagement at various levels with their respective unions. When Norma was asked how she came to know about the government reforms, her first response was not the government at all, but rather through her union. "Absolutely the federation. I mean, I'm a member of ----, they give, they send you, you know, updates all the time and what they're doing." Similarly, when Jeanne was asked where she got her "messages" about government reforms, she responded, "Well, we do have a federation that has some leadership amongst the teachers." She then went on to explain the strategy, which they had developed through union discussion, to the forced extra-curricular activity. "We're not saying no, but we're saying that [because of all of the curricular reforms] we don't have time."

Concluding Remarks

In addition to a regular work week, a teacher's life features both constant overtime work and constant learning. This study, analyzing the results of a questionnaire survey in 1998-99, and a more in-depth

diary and interview study in 1999-2000, found that the average Ontario secondary teacher works more than 47 hours each week and in addition devotes more than 12 hours each week to informal learning. As demonstrated in similar studies elsewhere in Canada and internationally, classroom teachers actually work more than double their timetabled instructional hours. Moreover, the in-depth diary method used for this study indicate that teachers may be significantly underestimating the time they spend both working and learning.

Teachers report high levels of engagement in intentional informal learning activities, both in school and at home during evenings and weekends. Much of their average 7 hours per week of work-related informal learning is directly tied to the pressure of compliance with externally-imposed educational reforms. Teachers learn intensively from peers inside and outside the school, and from reading a wide array of text and using and exploring computers, on their own time.

On the basis of this study, we conclude that any professional development programs for teachers should reflect this reality of how teachers learn and improve their teaching practice, rather than being based mainly on top-down and imposed, formal recertification regimes.

Endnotes

1. For further information on NALL, see the website: www.nall.ca.
2. Available from the NALL website as Working Paper #14-2000.
3. Ironically, a number of studies have already suggested that, in the context of our present national economy, large numbers of employed and unemployed workers are, if anything, already over qualified for the work which has been assigned to them, or for those (few) jobs which might be available for them. For many or most, skill formation and re-skilling are less relevant than underutilization of their existing skills (see, for example, Livingstone 1999).
4. This particular cohort was selected, partly because of its manageable size, partly because the project was based in Ontario, and partly because the Ontario Secondary School Teachers' Federation was willing to fund this phase of the project.
5. From the original 28, five could not be contacted by phone after several attempts, two indicated that they were not willing to participate, two others were on leave from work. Thirteen respondents completed and returned the first round of diaries. An additional six others initially agreed to participated and were sent packages, but did not return them in spite of follow-up phone calls. All names of diary respondents have been changed, and in some cases other details have been omitted to ensure anonymity.
6. It is perhaps interesting to note that only two of the 13 respondents made any notation in their daily logs about the activity of working on these diary sheets, and in each case, only in one or two instances over the one or two reporting weeks. In the original cover letter, we had requested that respondents should attempt to make frequent entries each day, even hourly if possible. However, judging from the ways in which the diary sheets were completed, it seems probable - precisely because of the nature of the work and home lives which these diaries depicted - that many were able to make diary entries only once or twice a day at best, in times which may well have been less than optimal for reflecting on matters such as what "learning" might have taken place during each (remembered) activity.
7. As an example of the differences in reporting styles, one respondent consistently represented three hours of a teaching day by stating simply that s/he had "taught two classes" while another respondent, on a regular basis, took up to eight lines on the daily log form to describe just one teaching period - including details on grade level and subject, objectives of the class, students responses, etc.
8. The one exception was Sally, who participated in an unofficial "work-to-rule"/slowdown campaign organized by the local teacher bargaining unit in the 1999-2000 school year to protest against an arbitrated collective agreement that had been imposed against their will.
9. In fact, one of the respondents reported that his/her family did not own a television, and indeed no television viewing was reported for one of the two weeks. However, during the other reporting week one of his/her children was ill and missed school for the entire week, with the parents taking turns caring for her. During this week, the respondent reported that on at least three occasions they had spent several hours at a neighbour's house, for the express purpose of being able to watch television there.
10. For example, claims made by respondents that learning had taken place during specific normal work routines were accepted only if these claims were supported with adequate evidence that new and significant knowledge had been acquired. Statements such as "taught a class - learned that many students

do not do their homework" or "learned that it is difficult to teach a class with high absenteeism" were not considered as constituting new and significant learning, and so were not included in the analysis. Another complication (raised initially by one respondent in a telephone discussion) was the issue of the possible difference between initial learning, and later re-learning, and/or learning "more of the same." The specific example raised in the discussion concerned the vast amount of time which many teachers spend over the years in informal "counseling" with students. Teenaged issues and problems, while very important to each individual student, soon become generic to the teacher. As the respondent queried, would subsequent discussions with new students constitute new learning? If so, with the same level of import as the initial event? Again, decisions about including these kinds of claims were made on a case-by-case basis, based upon the evidence provided and the guidelines which were developed for this analysis.

11. Under the new syllabus, all schools were required to assign a group of students to each teacher, who would meet with them on a regular basis each week for general guidance, support and direction in their academic routines.

12. As will be noted later, all four respondents commented frequently on the numerous gaps between the statement and the fact, in regard to the existence of support mechanisms. As Jeanne was quick to add in this case, "it would be nice to have more support. But, since he's [the consultant] at the board level as well . . . he's doing so much now that he doesn't have time to present all this stuff to us. But he's officially our consultant - but he's not there really. He doesn't have time."

13. These sessions were organized and hosted by Toronto area, university-based, faculties of education.

14. While there might well have been some initial chronological ordering to these two "waves," there is certainly a considerable amount of temporal overlap as well. Both categories of schooling reform initiatives remain very much in evidence at the present time.

15. Again, the exploration of specific or general teacher resistance or opposition to these reform initiatives was not a specific objective of this study. As a result, these reports of teacher resistance and opposition came out only as incidental comments in the overall discourse. One would assume, based on these few examples, that much more would have been reported if this theme had been explored more intentionally and thoroughly.

16. A third respondent, Barry, alluded to the concept on one occasion, in referring to the content of an administrative meeting held in his school, as being "nothing that I would count as, what you and I probably know as professional development or anything."

17. For historical reasons, there are four different provincial teacher unions in Ontario, and all teachers working in publicly-funded schools are automatically members of one or the other, depending on the type of school in which they work. The four respondents in this study were members of the Ontario Secondary School Teachers' Federation or the Ontario English Catholic Teachers' Association.

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Appendix A - [original diary survey package]

CANADIAN TEACHERS' LEARNING SURVEY

Greetings -

Recently we sent you a letter, thanking you for your participation in the first phase of our study last year, and asking if you would be willing to participate in this second phase. In a few days, we will telephone you to discuss this matter further. In the meantime, we are sending you material for the second phase, so that you would have an opportunity to examine it.

This phase of the project involves keeping "time-diaries" of activities over a period of one week. As you will see from the blank time-sheet, we are asking you to keep as complete an account as possible (and realistic), of what you do over the entire 24 hours of each day. In addition, where possible, we are asking you to note when you believe that you have gained new knowledge, understandings and/or skills, as a result of your activity during any specific activity.

Specific Instructions

1 Please xerox as many copies of the time-sheet as necessary. You may wish to put these blank sheets into a binder or other folder, so that they are readily visible and accessible during the day. If necessary, you can certainly use more than one page for each day's activities, but please start a new page for each new day. Each day should begin and end at midnight. If at all possible, we would ask that you begin with a Saturday or Sunday.

2. In the column entitled "Primary Activity (What you did)" simply write in the main activity with which you were engaged during that time period. For the most part, your activities will probably fall within one of three categories - A) Employment activities; B) Activities not related to employment; C) Formal or informal learning activities. Sub-categories and examples of each of these major groupings are provided on the next two pages, but please feel free to use your own words for describing your activities on these forms.

3. The column entitled "Learning Aspects/Comments" exists for two purposes. First, when you believe that the primary activity during specific time periods occasioned incidental self-learning on your part, please make brief notations here describing what you believe you have learned during that interval (eg. new computer command; new board procedure; new approach to teaching a skill; etc). (Understandably, if your primary activity was itself a formal or informal learning activity, you can either leave this column blank, or use it to describe your intentioned learning activity in a bit more detail.) Secondly, this column

can also be used to make comments, or further describe the activity in which you were engaged during that time interval.

4. Please try and update your time-sheet as frequently as possible each day - hopefully, every hour or two, if at all possible. Please continue with this time-diary for seven consecutive days (including weekends).

5. After you have finished, please make a photocopy of your time-sheets (as a back-up), and then place your originals in an envelope, and mail them to:

Professor Harry Smaller,
Faculty of Education, York University,
4700 Keele Street,
Toronto, M3J 1P3.

6. When we have received your completed time-sheets, we will be sending you an honourarium of $75.

Once again, many thanks for your assistance and support for this project.

Harry Smaller (Ph.D.) (416) 736-2100 Ext. 88807 hsmaller@edu.yorku.ca

Categories for Teacher Workload/Learning Diaries

A. EMPLOYMENT-RELATED DUTIES

Teaching - time spent in the classroom, lab, tutorial, seminar, teacher-adviser group, or other teaching assignment instructing students. This includes timetabled guidance counselling and teacher librarian duties if they constitute the major job assignment, plus any private lessons you give.

Supervision - supervising students, either as a timetabled assigned duty or voluntarily, in such situations as halls, library, computer lab, recess, lunchtime supervision, on school trips or on the school grounds.

Coaching - coaching or supervising athletic teams, clubs, drama or musical groups, or individual students outside of your assigned teaching and scheduled supervision duties.

Counselling Students and Parents - counselling students on an individual or small group basis outside of your scheduled teaching/supervision timetabled duties. This includes providing extra help and counselling students on academic or personal matters as well as reporting to parents on student progress.

Preparation and Marking - This includes preparation of and marking tests, exams and papers; other evaluations of students; reviewing course requirements and materials; researching/gathering course materials; planning instructional materials including lesson plans, labs, or course outlines; preparing handouts, videos, exercises or other instructional materials for students; and maintaining teaching-related records such as student marks, attendance, course budgets and schedules.

Travel While On the Job - Travel to field sites, second work locations, co-op supervision, travel to employment-related committee meetings or union meetings etc. Does not include travel between your residence and your place of work.

Administrative and Professional Activities - including departmental, school or school board committees or administrative functions, professional association or union activities, government-related work, communications with the media, writing textbooks, articles or curriculum documents, etc.

B. ACTIVITIES NOT RELATED TO EMPLOYMENT

Household Activities - shopping, cooking, cleaning and related housework.

Personal Activities - personal and family duties such as child or elder care, personal grooming or health-related personal care activities.

Commuting to and from Work - this does NOT include travel while on the job, or recreational travel.

Recreational Activities -participating in or watching sports, fitness activities, cultural activities, reading for pleasure, social events, watching television, movies, theatre or musical events, hobbies. Include time travelling to and from recreational activities or travelling as a recreational activity itself.

Community Activities - community work, religious activities, volunteer work, neighbourhood activities, cultural organizations, civic or political organizations, clubs, environmental activities, etc.

Sleeping and Resting

C. FORMAL OR INFORMAL LEARNING ACTIVITIES

Note - These may by considered activities in themselves (to be entered in the "Primary Activity" column), or learning done while participating in another activity listed above (to be entered in the "Learning Aspects/Comments" Column).

Formal Learning - include any courses, in-service training, or workshops you have participated in including academic courses, leisure-related courses, work-related training, language courses, computer-related courses, seminars or conferences, private lessons, distance education courses, union training programs, etc.

Informal Learning On the Job, Including Learning From or With Colleagues - any observation of or communication with one or more colleagues involving educational matters, curriculum, assessment, classroom management, teaching or coaching techniques, student problems, computer use, union or federation issue, staff meetings, learning another language etc. Include mentoring or advising of one or more colleagues or student teachers.

Informal Learning from Non-Job Related Reading, Research or the Internet - including learning from library research; reading informative books, journals, magazines or newspapers; searches or discussions on the Internet; etc.

Informal Learning in the Home (non-Employment Related) - include learning about home/auto maintenance or repair, cooking, cleaning, child or elder care, health issues, social issues, interpersonal skills, etc.

Informal Learning in the Community or during Recreational Pursuits - learning about fund-raising or technical skills, interpersonal or communication skills, coaching skills, managerial skills, learning about social issues such as politics, criminal justice, environment, or health issues, language acquisition.

TIME-DIARY Day ____ Month _____ Name _____ Page __ of __

Time BeganMidnite	Time Ended	Primary Activity (What you did)	Learning Aspects/Comments

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Appendix B - [February revised diary package]

CANADIAN TEACHERS' LEARNING SURVEY

First, many thanks again for participating in our "teacher diary" project this year. We are continuing with a another round of data collection this winter, in order to provide a complementary picture to that which we received during the fall, and we appreciate your consideration for participating in this second week of notations. We would ask that you "keep" this diary for seven consecutive days, which would include the weekdays of Monday February 28th to Friday March 3rd. Again, we ask that you keep as complete an account as possible (and realistic), of what you do over the entire 24 hours of each day.

We are making one change on the diary forms. The **"Primary Activity"** column remains the same. However, the instructions for the second major column have been changed somewhat, in order to try and elicit more information from respondents in relation to learning activity. It now reads: **"What did you know afterwards, that you didn't know before you began this activity?"** To be sure, there may be some activities where nothing new was garnered - whether as new ideas, facts, knowledge, skills, values, or whatever. However, we are hoping that this form will help prompt you to reflect closely on each activity, and what it might have left with you.

1. Please xerox as many copies of the time-sheet as necessary. You may wish to put these blank sheets into a binder or other folder, so that they are readily visible and accessible during the day. If necessary, you can certainly use more than one page for each day's activities, but please start a new page for each new day. Each day should begin and end at midnight. If at all possible, we would ask that you begin with a Saturday or Sunday.

2. In the column entitled **"Primary Activity (What you did)"** simply write in the main activity in which you were engaged during that time period (and, if appropriate, other things you are doing at the same time).

3. In the column entitled **"What did you know afterwards, that you didn't know before you began this activity?"** please make notations about whatever you may have learned during that time-activity. We do not expect that every (or even most) of these notations will refer to seriously significant or deep learnings. However, as you will note from the sample diary page enclosed, there are many kinds of learnings which we feel are worth noting. Here are some examples:

Primary Activity	What did you know afterwards, that you didn't know before?
Helped student with a personal problem.	Learned new things about student's home situation OR: Didn't learn anything; rehash of a continuing problem.
Read a newspaper article	Learned about likely new policies from the provincial government. OR: Didn't learn anything; just confirmed things I'd read somewhere else.
Tried out a new way of teaching a specific topic.	Learned about how well it might work. OR: Learned where the students had problems. OR: Learned it didn't work but not why.
Watched Jeopardy	Just entertainment; didn't learn anything. OR: Picked up a "factoid" I could use in a lesson plan.

4. Please try and update your time-sheet as frequently as possible each day - hopefully, every hour or two, if at all possible. Please continue with this time-diary for seven consecutive days (including weekends).

5. After you have finished, please make a photocopy of your time-sheets (as a back-up), and then place your originals in an envelope, and mail them to: Professor Harry Smaller, Faculty of Education, York University, 4700 Keele Street, Toronto, M3J 1P3. When we have received your completed time-sheets, we will be sending you an honourarium of $75.

Once again, many thanks for your assistance and support for this project.

Harry Smaller (Ph.D.) (416) 736-2100 Ext. 88807 hsmaller@edu.yorku.ca

Appendix C - Table A - Background Data for Interviewees, Diary Group, All Ontario and All Canadian Secondary School Teachers (from 1999 Survey)

	John	Jeanne	Barry	Maria	Diary Group N = 13	All Ontario Secondry Tch=85	All Canadian Secondry Tchrs N = 210
Age	30-34	35-39	45-49	45-49	Mean = 47.3 yrs	Mean: = 45.4 yrs	Mean = 45.8 yrs
Gender	M	F	M	F	F= 46% M= 54%	F= 47% M=52%	F= 46%; M= 54%
Birthplace	Can	Can	Can	Other	Canada= 77%	Canada = 74%	Canada = 78%
Yrs in Can (immigrant)	----	----	----	5+ years	Mean= 12.7 yrs Range: 5-22 yrs	Mean = 30 yrs Range: 5-xxyrs	Mean = 32yrs Range: 5-xxyrs
Race	White	White	White	Non-White	White - 84.6% E-Asian - 0.0% S-Asian - 7.7% Black - 0.0% N/A - 7.7%	White - 90.6% E-Asian - 2.4% S-Asian - 2.6% Black - 2.4% N/A - 2.0%	White - 93.8% E-Asian - 1.5% S-Asian - 2.6% Black - 1.5% Aborig - 0.6%
1st lng Eng	Yes	No	Yes	No	Yes = 92%	Yes = 95%	Yes = 96%
Other Lang	No	Yes	No	Yes	Yes = 31%	Yes = 28%	Yes = 24%
Grad Dgree	No	Yes	Yes	Yes	Yes = 31%	Yes = 41%	Yes = 39%
Tch. Exper	10 years	11 years	16 years	25+ yrs	Mean = 21 yrs	Mean = 20yrs	Mean = 21 yrs
Marital Status	Married	Married	Married	Married	Mar//Prt = 92%	Mar/Prt =78%	Mar/Prt = 77%
Spouse employed	Yes	Yes	No	Yes	Yes = 69%	Yes = 80%	Yes = 80%
Children at home	Yes	Yes	Yes	No	Yes = 69%	Yes = 59%	Yes = 54%
Type Schl	Comp.	Comp.	Comp.	Acdmic	Acadmic = 39% Tchnical = 23%	Acadmic = 54% Tchnical = 15%	Acadmic = 61% Tchnical = 11%

					Cmposite= 39%	Cmposite= 31%	Cmposite= 28%
Sch Locatn Inner-city Metro area Suburban Sm.cty/twn Rural	Sm.City	Sm.City	Sm.City	Metro	I/C = 15% Met. = 8% Sub = 23% Sm/City = 54% Rural = 0%	I/C = 27% Met. = 18% Sub = 15% Sm/City = 37% Rural = 4%	I/C = 20% Met. = 17% Sub. = 18% Sm/City = 39% Rural = 7%
Read daily paper?	Yes	No	No	Yes	Yes = 54%	Yes = 68%	Yes = 69%
Read book?	<Wkly	Daily	<Wkly	Daily	Daily = 46% >Weekly= 15% <Weekly= 39%	Daily = 37% >Weekly = 31% <Weekly = 33%	Daily = 41% >Weekly = 27% <Weekly = 31%
Follow news?	Daily	Daily	Daily	Daily	Daily = 100% >Weekly= 0% Other = 0%	Daily = 89% >Weekly = 10% Other = 1%	Daily = 87% >Weekly = 11% Other = 2%
TV viewing hours/day	1-2	1-2	2-5	Rarely	<1 = 31% 1-2 = 31% 2-5 = 23% >5 = 8% Rarely = 8% No TV = 0%	<1 = 30% 1-2 = 52% 2-5 = 11% >5 = 1% Rarely = 4% No TV = 2%	>1 = 31% 1-2 = 45% 2-5 = 14% >5 = 1% Rarely = 6% No TV = 3%
Home cmptr (hrs/week)	Yes 5 hrs/wk	Yes 5 hrs/wk	No	Yes 5 hrs/wk	Yes = 85% Mn = 6.8hrs/wk	Yes = 90% Mn = 5hrs/wk	Yes = 89% Mn = 5hrs/wk
Home Internet	Yes 4 hrs/wk	No	No	Yes 5 hrs/wk	Yes = 54% Mn = 3.5hrs/wk	Yes = 58% Mn = 4hrs/wk	Yes = 60% Mn = 4hrs/wk
FORMAL LEARNING ACTIVITY							
Crs/wkshp last 12 mth	Yes	No	No	Yes	Yes = 69%	Yes = 79%	Yes = 84%
Course typ Academic Recreation Wrk-relatd Computer	Acadmic Recreat Wrk-rel Comput	----	----	Wrk-rel	Acad = 15% Recreat = 31% Work-rel = 39% Computr = 15%	Acad = 31% Recreat = 18% Work-rel = 44% Computr = 26%	Acad = 27% Recreat = 18% Work-rel = 51% Computr = 31%

Crs.Mthod Univ/Coll Other Crs Workshop Conf/semin Correspnd Web/dist.ed	Wrkshp Confrnc Intrnet	------	------	Confrnc Othr Crs	U/C = 15% Other crs =15% Wkshp = 23% Conf/Sem= 23% Corresp = 0% Web/dist = 8%	U/C = 31% Other crs = 21% Wkshp = 41% Conf/Sem= 22% Corresp = 7% Web/dist = 2%	U/C = 27% Other crs= 23% Wkshp = 50% Conf/Sem= 35% Corresp = 5% Web/dist =
# crses tkn last 12 mth	4	-----	-----	N/A	Mean = 1.8 Range = 1-4	Mean = 2.4 Range = 1-18	Mean = 2.7 Range = 1-18
For credit?	No			No	Credit = 22%	Credit = 24%	Credit = 14%
For qualif? No No Qualif = 22% Qualif = 32% Qualif = 23%							
Take courses in future?	Maybe	No	Yes	No	Yes = 42% Maybe = 33% No = 25%	Yes = 51% Maybe = 32% No = 18%	Yes = 58% Maybe = 28% No = 14%
INFORMAL LEARNING ACTIVITY - WORKPLACE							
CM - Computers CS - Classroom strategies/management EX - Extracurricular student activities KT - New knowledge related to teaching LA - Other language				OT - Other Technologies SM - Supervisory/management skills SP - Student problems TE - Teacher education TM - Team work, prob solving, communication skills TS - Teaching particular subjects			
Types of informal learning in the workplace	CM OT SM TM TS CS SP KT	CM OT TM LA TS CS SP EX KT	CM SM TM TS EX	CM OT TS SP KT	CM = 92% OT = 54% SM = 23% TM = 23% LA = 8% TS = 54% CS = 31% SP = 54% EX = 46% KT = 39%	CM = 89% OT = 42% SM = 29% TM = 53% LA = 9% TS = 64% CS = 58% SP = 72% EX = 51% KT = 53%	CM = 87% OT = 46% SM = 27% TM = 54% LA = 9% TS = 64% CS = 56% SP = 67% EX = 49% KT = 52%
Infrml learn hours/wk	15 hrs	5 hrs	5 hrs	6 hrs	4 hours	3.5 hours	3 hours
					Comp =		

Most important informal learning?	Comptrs	Students	Personal	Comptrs	54% Tch Ed = 15% Personal = 15% Students = 8% Empl.rghts =8%	Comp = 33% Tch Ed = 15% Personal = 8% Students = 8%	Comp = 28% Tch Ed = 13% Personal = 7% Students = 6%
How best engage in informal learning?	Colegues	On own Colegues Students Principal	On own Colegues Studens Parents	On own Colegues Students	On own = 62% Colegues = 69% Students = 31% Parents = 8% Principals = 15	On own = 64% Colegues =79% Students = 33% Parents = 8% Princpals = 24%	On own = 64% Colegues = 78% Students = 28% Parents = 9% Princpals = 19%
INFORMAL LEARNING ACTIVITY - HOME							
CE - Child/Elder Care CL - Cleaning CM - Computers CO - Cooking GF -	Gardening/Farming HB - Home budgeting HE - Health			MR - Home/auto Mntence and Repair PD - Personal Development RE - Renovations/projects SH - Shopping			
Hrs work at home/week	20 hrs	60 hrs	30 hrs	12 hrs	24 hrs (mean)	18 hrs (mean)	16 hrs (mean)
Types of informal learning in home	Repair Shoppng Renovat	Repair Cooking Chld cre	Repair Cooking Cleaning Chld care Renovat Gardning	Cooking Finance Grdning	MR = 39% CO = 54% CL = 15% CE = 39% SH = 23% RE = 39% HB = 31% GF = 31%	MR = 46% CO = 46% CL = 18% CE = 28% SH = 22% RE = 49% HB = 24% GF = 41%	MR = 46% CO = 45% CL = 17% CE = 26% SH = 20% RE = 54% HB = 20% GF = 42%
Most important learning in the home	Grdning	Child care	Health	N/A	MR = 8% PD = 8% GF = 8% CE = 15% HE = 15%	MR = 23% HB = 13% GF = 11% CE = 13% HE = 6%	MR = 26% HB = 11% GF = 10% CE = 10% HE = 9%
Hrs/wk infrm learning	1 hour	N/A	1 hour	1 hour	1.4 hours	2 hours	2 hours
INFORMAL LEARNING ACTIVITY - COMMUNITY							
CS - Communication Skills FS - Fundraising Skills HS - Health and Safety			IP - Interpersonal Skills OM - Organization and Managemnt Skills SI - Social Issues			TS - Technical Skills CR - Community Relations CK - Cultural Knowledge	
Comm.Vol?	Yes	No	Yes	No	Yes = 69%	Yes = 62%	Yes = 68%

Hours/week	6 hours	-----	2 hours	----	2.6 hours	4.3 hours	4.2 hours
Informal learning	TS OM SI CS IP	-------	FS TS OM IP	------	FS = 15% TS = 31% OM = 46% SI = 39% CS = 8% IP = 23%	FS = 15% TS = 31% OM = 46% SI = 39% CS = 8% IP = 23%	FS = 15% TS = 31% OM = 46% SI = 39% CS = 8% IP = 23%
Learning (hrs/wk)	2 hours	-------	2 hours	----	1.4 hours	2.5 hours	2.4 hours
Most important learning	Inter-personal		Comunity relations	----	CK = 13% HS = 13% SI = 38% CR = 25% IP = 13%	FS = 15% TS = 31% OM = 46% SI = 39% CS = 8% IP = 23%	FS = 15% TS = 31% OM = 46% SI = 39% CS = 8% IP = 23%
Learning work relatd?	Yes	----	Yes	-----	Yes=67%		
GENERAL APPROACH TO LEARNING							
Usual method of learning	On own	Both methods	On own	Both methods	On own = 44 W/Others = 5 Both =28 Varies = 24	On own = 44% W/Others = 5% Both =28% Varies = 24%	On own = 44% W/Others = 5% Both =25% Varies = 25%
Formal vs informal learning	Depends	On own or depends	Depends	On own or depends		Courses = 11% On own = 34% Both = 20% Depends = 47%	Courses = 11% On own = 31% Both = 21% Depends = 45%
Most interested, formal learning	Comptrs	Hobbies	Curriculm dvelpmnt	Comptrs	Cur.Dev = 6% Students = 4% Tchr Ed. = 9% Hobbies = 6% Cmptrs = 27% Health = 6% Acadmic = 9% Sprts/trav = 2%	Cur.Dev = 6% Students = 4% Tchr Ed. = 9% Hobbies = 6% Cmptrs = 27% Health = 6% Acadmic = 9% Sprts/trav = 2%	Cur.Dev = 4% Students = 4% Tchr Ed. = 14% Hobbies = 4% Cmptrs = 25% Health = 4% Acadmic = 8% Sprts/trav = 4%

					Retiremnt = 7% Econ/finc = 9%	Retirement = 7% Econ/finan = 9%	Retirement = 7% Econ/finan = N/A
Most interested, informal learning	Comptrs	Religion	Eductionl theory	Social issues		Tch.Ed = 3% Hobbies = 6% Fine arts = 3% Computrs = 17% Health = 9% Academic = 9% Sprts/trav = 11% Child care = 6% Gardening = 9% Repair = 5%	Tch.Ed = 4% Hobbies = 5% Fine arts = 6% Computrs = 16% Health = 9% Academic = 7% Sprts/trav = 8% Child care = 5% Gardening = 8% Repair = 5%
Method of future learning?	Other ways	Other ways	Other ways	Both		Courses = 15% Othr wys = 72% Both = 13%	Courses = 18% Othr wys = 69% Both = 13%

Appendix D - Table G - Miscellaneous Data from CTF/NALL Survey, 1998-9
(Note - comparative total work hours identified in 1999-2000 diary study given in brackets)

Name	Age	Tea Exp	Farm Status	Tot Work Hrs (tot - diary)	Tot Work-Related Inform Learn Hrs	Tot Home/Other Inform Learn Hrs
Jane	50-54	11-20	fem-kids	41 (41.8)	2	10
Barry	45-49	11-20	male-kids	37 (46.3)	5	3
Grace	45-49	21+	fem-nokids	48 (47.6)	1	9
John	35-39	1-10	male-kids	49 (52.8)	15	9
Jeanne	35-39	11-20	fem-kids	46 (50.8)	5	8
Norma	45-49	21+	fem-nokids	33 (57.9)	6	5
Ben	50-54	21+	male-kids	43 (49.5)	2	10
Dan	n.a.	21+	male-kids	41 (52.1)	5	3
Eric	45-49	21+	male-kids	n.a. (45.3)	2	4
Jim	50-54	21+	male-nokids	40 (42.5)	2	2
Alice	35-39	11-20	fem-kids	28 (38.2)	0	5
Robert	50-54	21+	male-nokids	46 (60.1)	1	30
Sally	50-54	11-20	fem-kids	46 (39.3)	1	2
averages				41.5 (48.4) N=12	3.6 (7.0) N=13	7.7(5.7) N=13

Note: all reported hours are per week

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