Transitions Longitudinal Study

2nd Annual Report to the Ministry of Training, Colleges and Universities

June 2006

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ACKNOWLEDGEMENTS

The *Transitions* longitudinal study exists only because of the work of the Learning Opportunities Task Force. Between 1998 and 2002, LOTF revolutionized services and programs for students with learning disabilities at ten post-secondary pilot institutions. The core of the pilot programs has since been replicated at all colleges and universities in Ontario in the form of the Enhanced Services Program. As such, the legacy of LOTF exists in the fact that Ontario provides the most comprehensive support for post-secondary students with learning disabilities in the world. *Transitions* will help to test the efficacy of this statement as the study unfolds over the next decade.

The province of Ontario owes a debt of gratitude to Dr. Bette Stephenson, who was a passionate and active Chairman to the task force. Great expertise and commitment was exemplified by Eva Nichols, who acted as Senior Consultant to the Chair.

This acknowledgement would not be complete without paying tribute to two other individuals who served LOTF. Bonnie Tiffin was a capable Executive Coordinator for the Richmond Hill office, and Dr. Laura Weintraub was an impassioned consultant to LOTF until her untimely death in January, 2004.

EXECUTIVE SUMMARY

The conclusion of the second year of the Ministry of Training, Colleges and University's ten year longitudinal study has yielded impressive results. These results will be detailed in the coming pages, but it is worth noting from the outset that our *Transitions* cohort is doing well. That is, our population's profile compares well to the general population of post-secondary educated adults of similar age in our chosen thematic categories of education, employment/ career and social development. Though achieving close comparisons with the general population may not seem like an earth-shattering result, it is our contention, based on the perspective of as recently as 15 years ago, that this is a significant and even remarkable early result. If the data existed to provide an accurate comparison of *Transitions* participants with a learning disability cohort of 15 years ago, one could better appreciate the dramatic progress that has been made. Certainly, there are some concerns about our cohort that we have noted, mainly related to some under-employment and unemployment, but there are also some pleasant surprises such as having a higher than average post-secondary retention rate. It will be interesting to observe if our early results broaden into entrenched patterns, or if over time, discrepancies between *Transitions* people and the general population level off and disappear. In the end, this comparison with the general population may be what matters most. Perhaps the success and efficacy of the LOTF pilots and the current MTCU programs for students with learning disabilities will be revealed by the extent to which our *Transitions* cohort attains the achievements of the general population.

In the *First Annual Report*, we identified two major challenges endemic to longitudinal research, as follows:

1. **high attrition rates**
2. **the absence of a control group**

1. The Attrition Issue — Two years ago we began this study with the intention of convincing 10% of the 1242 validated former LOTF students with learning disabilities to commit to the study. A 10% commitment rate from any group is a realistic percentage to aspire to in longitudinal research. However, we had to consider the fact that the study commenced a full two years after the cession of the LOTF pilots, and that both finding people and convincing them to become study participants would be difficult. A forensic search for participants did not lend itself to a feeling of optimism, but to become pessimistic would have been to underestimate our *Transitions* people. As reported last year, with hard work and the support

from contact people in the former pilot sites, we were delighted to get 215 participants in the first year. And with a great deal of effort aimed at engaging participants, we are pleased to report that in the second year there are 196 participants whose input will be analyzed in this report.

This, and all subsequent reports will make constant reference to the evolving components of our ongoing **engagement strategy**. A well-conceived, comprehensive and well-executed strategy to engage participants in the study is key to the continued success of *Transitions*. Study participants do not simply fill out a survey once a year. Participants are contacted several times during the year, since the primary purpose of the study is to make *Transitions* relevant by keeping people informed about themselves. *It is our goal as researchers to employ focused strategies that will result in ownership of Transitions by the participants for the duration of the study.*

Transitions participants complete the annual survey either through an online Portal or by telephone interview as soon as they are prompted by e-mail. Others require several reminders, while another group must be constantly reminded by e-mail, telephone and mail. Participants are busy, and at an average age of 26.06, they are in a transitional period of their lives, so we understand why completing our survey is not their number one priority. Interestingly, participants who seem reluctant to complete our survey seem no less committed to *Transitions* once we are able to get their attention.

After survey completion the engagement plan continues, first with a thank you card and a gift, and then with e-mail communications and postings on the Portal. The Portal is our vehicle for making this study relevant in a way longitudinal studies have not done in the past. For example, from mid November 2005 until the end of January 2006, for a period of nine consecutive weeks, participants were sent e-mails asking them to respond to questions posted on the Portal. The nine posted themes were a re-iteration of the sixteen *Transitions* Trends from the first annual MTCU report. What followed was an exciting wealth of qualitative information for study participants as they commented on the unfolding trends of their own lives.

Perhaps most important, and a first for longitudinal research, the entire *Transitions* report for each year of the study's 10-year duration, will be posted and available to the general public on the portal: **www.transitionsportal.ca**

2. The control group issue — It would be neither possible, nor desirable, nor ethical to deny service to a group of students with learning disabilities for the purposes of comparison with our post-pilot participants. Admittedly, there is an inherent weakness in longitudinal research with respect to control group comparison. However, the strength of longitudinal research is that it yields extremely specific and unique information garnished over time. Since the purpose of longitudinal research is to measure change over time, it is time that lends itself to becoming a worthy substitute for a control group. In the absence of research findings, which can only be determined over a period of years, we noted emerging patterns from the research data in the *First Annual Report* to the MCTU, and we called these *Transitions* Trends. This year, in the *Second Annual Report*, we are excited to note the change that has occurred in our cohort, with some Trends being strengthened or changing direction as a result of the second year survey responses. We will highlight the *Transitions* Trends in each annual report to MTCU in order to present the reader with an evolving profile of our participants. At the end of the study, on the strength of 10 years of input and analysis, some trends will be established as research findings.

The 2005 profile of *Transitions* Trends:

Trend # 1: Participants' current level of satisfaction with LOTF's pilot programs remains high years later. (Continuing trend) *

We asked participants for their impressions about the LOTF pilot programs in the 2004 Intake survey, but did not ask this question in the 2005 survey. Still, when we asked people how their learning disability currently affects them, many spoke of having developed resiliency that was directly attributable to LOTF pilot programs. On the basis of the many unsolicited responses which praised LOTF, the trend remains in this year's report.

Trend # 2: Participant relationships have endured with former pilot staff. (Continuing Trend)*

Similar to Trend #1, we asked about relationships with pilot staff in the 2004 Intake survey, but not in the 2005 survey. Again, a considerable number of participants mentioned the value of pilot staff in relation to questions about their success in education and employment. A sufficient number of the *Transitions* participants are still in contact with staff (particularly Disability Counsellors and Learning Strategists), which justifies noting this as a *Transitions* Trend in the second year. Judging from the many unsolicited responses, it seems likely that several of our

participants became committed to the study because of these very positive relationships.

** Trends #1 and #2 are noted in response to unsolicited participant comments received outside of the formal survey process. Though we may note such comments in subsequent reports, they are unlikely to appear as Transitions Trends again after this year.*

Trend # 3: Participants place a high value of post-secondary education. (Continuing Trend)

Forty-five percent of participants reported being in post-secondary education in 2004, and that figure remains the same in 2005. We were surprised at the high percentage in 2004, and further surprised that the percentage had not gone down in 2005 as participants forge employment and career avenues. More surprising, out of 95 participants who graduated in 2004, 23 (24%) returned to school. In 2005, 88 (45%) participants are still studying, and an astonishing 34 (35%) are returning to school after graduation.

The reasons for participants returning to post-secondary programs will be further investigated in the next round of surveying. The fact that a rising number of participants are pursuing second degrees and diplomas may attest to the resiliency former pilot students have developed in the same area they continue to describe as the most challenging aspect of their lives. Depending on survey results, this Trend may become more specific or else we may add a new educational trend as follows: *An increasing or high number of Transitions participants are pursuing further post-secondary education after graduation*.

Trend # 4: *Transitions* participants have a higher than average retention rate than the general population in post-secondary education. (Continuing Trend)

Last year, we reported that 10% of *Transitions* participants left their program of study without finishing, as compared to 15% in the general population. For a population that has traditionally experienced unusually high drop-out rates, this trend was very encouraging. In the 2005 survey, 9% of participants reported dropping out, and nine of those who had previously reported being PSE Leavers in 2004 had returned to school. Consequently, a very encouraging trend has become further strengthened in our 2005 report.

Trend # 5: *Transitions* PSE Leavers cite inability to pass required courses as the most

common reason for not graduating. (New Trend)

Nine *Transitions* participants cited their inability to complete required courses as the most common reason for not graduating, followed by financial difficulties (5), did not enjoy their field of study (4), or indecisiveness about what to do. In the general population, the most common reason given for not graduating is to pursue employment opportunities. Nine students citing an inability to pass required courses is not a large sample, but we will monitor this trend carefully since passing requisite courses was one of the original LOTF success indicators.

Trend # 6: *Transitions* participants combine post-secondary education and work reasonably well. (Continuing Trend)

In 2004, 40% of participants were still studying while working. In 2005, 53% of participants are combining post-secondary education with work. Of these, 83% are employed part-time, and 17% are full-time. It is to be expected as our cohort makes a transition from post-secondary education to careers, that the percentage of participants in the work force will increase. However, that 53% are working and studying is note-worthy. This trend is consistent with Sandra Franke's findings in the general population (64% of males and 49% of females combine work and school in 2004), and may speak to the resiliency of our *Transitions* cohort.

Trend #7: A high percentage of *Transitions* participants are living with their parents. (Continuing Trend)

The 2004 Intake survey indicated that 49% of participants are living with parents, which was surprising with an average age of 25.66 for our population. (Perhaps we shouldn't have been surprised as this trend is part of a phenomenon noted in several publications including the cover of *Time* magazine in January, 2004, entitled, "Grow Up? Not so Fast."). For 2005, as the average age of participants increased to 26.06, the number living at home has been reduced to 39%, so some movement, possibly related to employment or career advancement, has occurred.

In the 2005 survey, we also asked why participants have chosen their current living arrangements. Of the 39% still living at home, 80% cited financial reasons. Understandably, 51% of participants indicated that they are currently dealing with student debt. Consequently, we are probing financial concerns further in our third survey. Early indications are that in next year's report we may cite a new trend as follows: *Financial concerns are impacting on Transitions participants' life decisions.*

Trend # 8: *Transitions* participants have lower salaries and are under-employed compared to the general population. (Continuing Trend)

In 2004, we reported that 21% of participants employed full-time could be considered under-employed due to earning salaries of less than $20,000 annually.* In that survey our salary ranges were too broad, and we hesitated to add that participants in the $20,000-34,999 range might also be under-employed. Salary ranges have been subsequently reduced to five thousand dollar increments. In 2005, with 29% of participants working full-time earning less than $20,000 annually, 14% earning between $20,000 and $25,000 and 18% earning between $25,000 and $30,000, we can now claim that *Transitions* participants are experiencing under-employment.

For comparison purposes, we also asked people if they regard themselves as under-employed, defining under-employment in subjective terms, as "employed at a lower salary than your education and work experience warrants." For recent university graduates, six feel under-employed, while five do not. For recent college graduates, 14 consider themselves under most affected by their learning disability. This figure was followed by 53 (27%) of participants who reported that their learning disability is most affected in work situations. Twenty (10%) participants are most affected in social/relationship situations.

** We have reserved the designation 'under-employed' for those working full-time and earning salaries that fall under the 25th percentile of post-secondary graduates in the general population (also used in Allen and Vaillaincourt "Class of 2000."). The 25th percentile of the general population university graduates earns $31,000, and for college graduates $24,000. Therefore, using the figure of $20,000 is a conservative estimate of what may be emerging as a significant, and disturbing trend.*

Trend # 9: Post-secondary Education (PSE) Leavers employed full-time are generally earning high salaries that are comparable to graduates in the general population. (Continuing Trend)

In 2004, *Transitions* PSE Leavers surprised us by indicating that they had comparable salaries to the general population. In 2005, 50% of our Leavers earned between $20,000 and $34,999, with four earning less than $20,000 and one earning above $35,000. This trend will be monitored to see if it is an actual trend or simply an anomaly perhaps due to our cohort's adjustment

to the work force.

Trend # 10: Field of Study likely influences low salaries of *Transitions* participants. (Continuing Trend)

The majority of *Transitions* participants are Arts and Social Science graduates where salaries tend to be lower than in the professional degrees such as Medicine, Law and Engineering.* This was true in the 2004 survey and remains true in 2005. For example in our 2005 profile, there were 95 participants enrolled in post-secondary education, of which only 24 were in fields outside of Arts and Social Science programs (Business 7, Science 6, Computers 4, Engineering 4, Math 1 and Architecture 2).

Until recently, students with learning disabilities have tended to cluster in the Arts and Social Sciences and have not been represented in science and professional programs in proportion to the general population. We will monitor this trend, and in particular examine whether or not participants are tending towards science and professional programs in their second post-secondary endeavours.

**This observation is supported by at least two of the main general population studies we are using in Transitions for comparison purposes with our cohort.*

Highlights from the 2003-2004 Ontario University Graduate Survey. Council of Ontario Universities.

Provincial Overview of Survey Results Ontario. Employment Profile: 2001-2002 College Graduates. Ministry of Training, Colleges and Universities, 2003.

Trend # 11: Female *Transitions* graduates are more likely to experience high rates of under-employment than male participants. (Continuing Trend)

Women in the general population make significantly less money annually than men do – usually between $4000 and $8000 less. Men experience a 19% probability of low pay, while women experience a 34% probability (Janz, "Low-paid employment," p. 15). In the 2004 survey, 18% of female *Transitions* participants employed full-time indicated that they were under-employed versus 2% of male participants. In 2005, 19% of female graduates working full-time were under-employed (earning in the bottom 25th percentile), while 7% of male graduates fit

that designation.

Trend # 12: *Transitions* participants have a high unemployment rate. (Continuing Trend)

In the 2004 survey we discovered that *Transitions* participants rate of unemployment was 15% compared to the general population rate of 7%. In 2005, the *Transitions* unemployment rate decreased to 10%, which is encouraging, but still higher by 3% than the general population.

Trend # 13: *Transitions* participants' learning disability remains most challenged by issues related to academics and employment. (Continuing Trend)

In 2004, participants were asked, "in what area of your life does your learning disability most affect you?" Despite the fact that only 95 participants were currently studying, 155 (75%) responded that *education* is the area in which their learning disability most affects them. This was followed by 41 (19%) of participants who said their learning disability was most affected in areas of employment, with only 14 (7%) claiming that they were most affected in social/ relationship situations.

In 2005, 123 (62%) participants responded that education remains the area in which they are most affected by their learning disability. This figure was followed by 53 (27%) of participants who reported that their learning disability is most affected in work situations. Twenty (10%) participants are most affected in social/relationship situations.

Given the difficulties participants continue to have with academic issues even after graduation, the fact that 34 (35%) have returned to school to pursue another degree or diploma in 2005, is a testament to our participants resiliency and determination. *Transitions* participants have consistently taken the difficult path or the road less travelled for persons with learning disabilities, that is until this present generation. As a result we are witnessing a cohort of adults with learning disabilities achieving success in the arena of their greatest challenge.

Trend # 14: *Transitions* participants place heavy emphasis on educational and career goals, while social goals rate relatively low. (New Trend)

In the 2005 survey, we decided to probe in more depth some of the answers in the social category from the 2004 survey. Specifically, we wanted to know more about our participants' goals and priorities. When we asked participants to a pick current goal of primary importance,

33% listed career goals (i.e. getting a job, advancing within a company), 21% chose academic goals (i.e. graduating or pursuing further education), and only 14% chose social goals (i.e. getting married, starting a family). For a transient population with an average age of 26.06, perhaps it should not be surprising that career and academic goals are high. Still, the rating of social and relationship goals seems low. However, it must be remembered that students with learning disabilities have to work very hard and be very diligent in order to be successful.

Perhaps this group of highly successful LD adults, who have been in pursuit of academic and career success for many years, may have done so at the expense of some social goals. This theme will be monitored as we progress with the study.

Trend # 15: *Transitions* participants appear to be resilient about their social relationships. (Continuing Trend)

In 2004, we reported that participants were generally active in the arts, hobbies and sports, and that they tend to make friends easily. In 2005, this trend continues as 67% of participants responded that their learning disability affects then least in terms of their relationships. Seventy-one percent report being satisfied with their friendships, 81% were satisfied with familial relationships, and 51% were satisfied with romantic relationships.

Trend # 16: *Transitions* participants have chosen careers that build on their areas of strength and interest. (Continuing Trend)

In 2004, we reported that 70% of participants indicated that their current employment built on their areas of strength and interest, while 46% said they were able to avoid their area of greatest difficulty. Given that the fact that our cohort is at the beginning of its career development, this was an encouraging pattern to be able to report.

In 2005, the percentage increased to 75% of participants whose employment allowed for their strengths and interests, while 50% were able to avoid their most challenging difficulties.

Trend # 17: *Transitions* participants disclose their learning disability at work only when necessary for the job. (Continuing Trend)

All of our *Transitions* participants had self-advocacy training during their post-secondary years while participating in LOTF pilot programs. As well, all of our participants were required to

self-identify their learning disability to the special needs office and to their instructors in order to qualify for academic accommodations. Still, in 2004, only 30% of *Transitions* people disclosed that they had a learning disability at work.

In 2005, the percentage of self-identification has increased modestly to 38%. Most participants have indicated they choose not to disclose because their learning disability does not affect the type of work they do, and they do not want special treatment. Of those who have disclosed, 95% reported having had a positive reaction from their employer. Self-disclosure of a learning disability is something many people fear, and a positive experience of 95% is very encouraging.

Trend # 18: Significantly more women disclose their learning disability at work than men. (New Trend)

In 2004, we noted that 25 women had disclosed that they have learning disability at work versus only 11 men. In 2005, this number has increased to 33 making disclosure for women versus only 13 for men. The reasons for this trend are being explored in the third year survey.

Trend # 19: Few *Transitions* participants currently employed use accommodations at work (New Trend)

In the 2005 survey, we asked participants whether they use accommodations for their learning disability in the workplace. Of the 142 participants currently employed, only 18 (13%) are using accommodations. The most commonly used accommodations used include: a computer with adaptive technology, writing support from co-workers, flexible deadlines and working from home.

It is interesting how *Transitions* participants are adapting to work and career as indicated in Trends 14, 16, 17, 18, and 19. Historically, one of the issues about providing academic accommodations and supports to students with disabilities has been a generalized criticism about their ability to fit into *'the real world.'* The pattern that seems to be emerging from our cohort is that as people enter the real world of the labour market they adapt quickly and effectively, focusing on career goals, only discussing their learning disability if it is relevant to the tasks at hand, and asking for only for what is required to succeed at the job. These trends will be monitored closely in the coming years as the *Transitions* longitudinal study moves forward.

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I. Introduction and Context

The Learning Opportunities Task Force (LOTF) permanently altered the post-secondary landscape for students with learning disabilities between 1998 and 2002. It is simply a statement of fact that the pilot programs established by LOTF during this period were unprecedented in the world. The Enhanced Service Fund and a number of innovative projects that have been entrenched since 2002 continue to position the Ministry of Training, Colleges and Universities as unique in the world for its provision of services to students with learning disabilities.

In 1997, LOTF was established under the leadership of Dr. Bette Stephenson, with the following mandate:

1. To improve the transition of students with specific learning disabilities from secondary school to post-secondary education.
2. To enhance the services and supports that students with learning disabilities receive within the post-secondary educational sector, such that they can complete their education successfully.

Perhaps the most important fact to emphasize about LOTF's functioning during the pilot years is that all of its assumptions, programs, evaluations and ultimately its recommendations as reflected in its final report, were based upon research. LOTF was established as a research project in order to substantiate and monitor the progress it made towards creating a level playing field for post-secondary students with learning disabilities in Ontario.

Between 1998 and 2002, **1242** students met the very rigorous LOTF participation criteria, received pilot services, and participated in pilot projects' evaluation process, which resulted in over 3000 completed questionnaires. These facts made the LOTF project the largest research endeavour of its kind in the learning disabilities field, unique both in its depth of enquiry and the selection process of its participants.

In order to achieve baseline consistency for pilot participant evaluation measures, LOTF developed student Success Indicators, which are contained in the LOTF vision statement.

These indicators were first articulated as:

- entry into an academic program of the student's choice, provided that the student meets standard entrance requirements;
- successful meeting of the essential requirements of the program, although the manner in which the student demonstrates mastery may be altered by academic accommodations, programme modifications or the use of coping and compensatory strategies, but with no change to standards or outcomes;
- graduation from the student's chosen program and institution;
- possession of the requisite skills to pass any licensing requirements, with appropriate accommodations, if needed, related to the field of study or career which he or she has chosen;
- being employment ready;
- being sufficiently job ready so that he or she can advocate for any job accommodations that may be required in order to obtain and maintain employment.

The primary vehicle for evaluating the student Success Indicators were the students themselves. The LOTF database contained more than 3000 student questionnaires collected as intake, progress and exit questionnaires over a period of four years.

The LOTF final report contains seven Key Findings and 24 Recommendations based on this empirical evidence. The first key finding reads as follows:

Students with learning disabilities are as able to succeed in post-secondary education as their non-disabled peers, provided that their transition to post-secondary education is appropriately facilitated.

This statement is a powerful endorsement of the success of LOTF initiatives during the pilot years. Consequently, the report articulates the following recommendation:

Proven transition programming should be available to students with learning disabilities who are going on to post-secondary education and are interested in participating in such

opportunities.

Project Advance was a very successful comprehensive summer transition program that was created during the pilot years. LOTF established another seven programs at four colleges and three universities at the end of the pilot years, and these Summer Institutes have continued under MTCU along with Project Advance. Innovative transition programs such as the Adopt-a-School are now supported by the MTCU throughout Ontario and are all intended to assist students with entry into post-secondary education.

Early during the pilot experience, LOTF recognised the need for comprehensive programming to assist with the transition from secondary to post-secondary education. However, it was only as the first cohort of LOTF pilot students began to graduate from post-secondary education that the need for transitional support into the work force became fully understood. Dealing with this realization may become one of the most important contributions of this longitudinal study to the field of learning disabilities.

I. 1. The Application of Knowledge

The pilot programs were well funded, and students with learning disabilities were offered a comprehensive range of programs and services between 1998 and 2002. Pilot students consistently identified that, in addition to an improved understanding of their learning disabilities, they most valued:

- provision of learning strategy supports by appropriately qualified and engaged staff
- access to and instruction in assistive technology from staff with expertise in both the technology itself and learning disabilities.

Currently, all institutions provide services, supports, and accommodations to students with disabilities. These services are quite diverse and are funded by the Ministry's Accessibility Fund allocation. It was on the basis of these Key Findings and LOTF's preliminary recommendation to the Ministry of Training, Colleges and Universities, that the Enhanced

Services Fund (ESF) was created at all colleges and universities in Ontario in September, 2002. It is through this dedicated funding envelope that students with learning disabilities are provided with the support of knowledgeable Learning Strategists and Assistive Technologists.

Because of its intensive reliance on research upon which its key findings are based, LOTF was able to identify which components worked particularly well for students during the pilot years, and then apply that knowledge to its final report recommendations.

The supporting data for the creation of the Enhanced Services Fund is as follows:

- pilot institutions reported that 1120 pilot students utilised assistive technology and 1086 pilot students utilised learning and metacognitive strategies during the pilot period
- pilot students cited assistive technology and learning metacognitive strategies as the most useful program components provided to them by the pilot projects
- 86% of pilot students indicated that they had used and/or plan to use assistive technology
- 94% of pilot students indicated that they had used and/or plan to use learning strategy and metacognitive training supports

On the basis of research, LOTF was able to refine certain components from each of the unique pilot programs into a set of focused supports that best assist students with learning disabilities to become successful and independent learners. Many of the institutions providing these services include transition programming into and out of post-secondary education, self-advocacy training as well as career counseling and training in their Enhanced Services Projects. Thus, the justification for ESF funding was easy to produce and accountability is equally easy to establish at any given time. In fact, the Enhanced Services Fund was purposely established to set an exemplary standard of accountability to the Ministry of Training, Colleges and Universities. Still, it must be remembered — a fact that is particularly relevant to Transitions — successful entry into and graduation from post-secondary education is not the only goal for students with learning disabilities.

I. 2. Beyond Success Indicators

As stated, all LOTF research and evaluations emphasised, above all else, input from pilot students with learning disabilities. The information gathered proved that all targeted Success Indicators were met. ESF continues to provide students with learning disabilities with comprehensive program components in a more focused fashion based on the pilot experience.

The six Success Indicators articulated in 1998 were certainly ambitious, particularly given the difficulties encountered by students leading up to the establishment of the pilots. Case in point, despite strong legislation in the form of Bill 82, and later in the Education Act, which requires school boards to identify and provide appropriate service to all students with special needs, over 80% of the pilot students arrived at college or university without adequate documentation.

As well, 35% of the pilot students repeated at least one grade, and only 56% were identified as having a learning disability within the primary or secondary school. Of these, 70% stated that they received some special education in elementary school, but in senior grades, there was significantly less help available—all of which is indicative of failure of the system to provide a proper level of specialised programming for which it was, and is, legislated. Not surprisingly, 85% of incoming pilot students reported that their learning disabilities mostly affect their academic functioning.

Thus the creation of the Learning Opportunities Task Force in 1997, with a five-year allocation of $30 million, was based upon a fundamental premise:

"There is an assumption that attending and graduating from post-secondary educational programs improve employment opportunities, which provide higher wages, which increases financial and personal independence and thus enhances the overall quality of the lives of its graduates; the question remains as to whether this assumption is true for young men and women who have learning disabilities." (Levine and Nourse 231)

LOTF answered the first part of this question by achieving and often exceeding

expectations related to Success Indicators. Answering the second half of this question, which is essentially related to *quality of life*, requires in-depth, follow-up research of the kind only available through the use of a longitudinal study, relying upon both quantitative and qualitative research methods:

"Studies that focus on isolated factors such as employment at a single point in time do not provide an adequate picture of a graduate's situation. In order to understand adjustment patterns for individuals, we need to develop composite measures to examine multiple components as they interact." Thus in addition to comparing multiple components using quantitative measures, "we need to employ qualitative analytic techniques to provide a much-needed look at the factors that affect long-term adjustment and paint a picture of post-school life that is currently unavailable, given the constraints of quantitative research methods." (Levine and Nourse 231)

In the province of Ontario, we have concentrated our collective efforts on education for good reason. As students entered into jobs, careers and all facets of life after the pilot experience, LOTF was quite confident that they did so armed with real benefits to assist them in reaching their potential. We have continued with, and do not see any reason to be dissuaded from the assumption that what matters most in determining success, broadly speaking, is a good education appropriately applied.

Still, even as LOTF was satisfied with student achievement of Success Indicators, there were lingering questions about the success of students with learning disabilities after they left the pilot programs. Positive the educational experience, we know that learning disabilities are very much a life-long condition. Therefore, we could not help but wonder if we had accommodated and served students well, by not only helping them to pass into and out of post-secondary education, but also to attain the skills they need to become fully successful after their post-secondary years.

We asked ourselves if the effects of the pilot experience would continue beyond the achievement of Success Indicators. Most of all, we wondered if our pilot population had attained resiliency and permanent skills, and if the pilot experience offered students with learning disabilities the potential to improve their lives for themselves.

"What happens 5 years beyond the transition period, or 10 years beyond, has been of less concern to the field. Questions have arisen as to how adequately youth with learning disabilities served by special education are prepared to cope in later years, particularly after the major portion of services previously provided are no longer available. Some follow-up investigators have attempted to respond to this query, but the majority have simply combined data from youth in transition, youth in floundering period, and youth in their 20s who are well into the struggle of adjusting to adult life. It is clear that the expectations and realities for these different periods of time are quite different." (Levine and Nourse 220)

I. 3. The *Transitions* Longitudinal Study

The problem with asking these questions is that the answers do not come easily. The only way to know what happens in the post pilot years is to follow a significant percentage of the population for a period of some years. Longitudinal studies are not undertaken lightly. They tend to be expensive and difficult to conduct. In addition, contemplating doing a forensic audit, that is, studying a population that had disbanded for two full years by the time the study had begun, is highly unusual. Still, LOTF determined that the uniqueness of this research project and its population of students with learning disabilities was simply too important to risk not tapping into.

Consequently, the *Transitions* Longitudinal Study was launched with the following goals in mind:

1. To inform persons with learning disabilities about their own potential and their continuing obstacles and successes in order to assist them in making positive changes for themselves throughout their lives.
2. To inform government and policy makers about the needs and abilities of students and persons with learning disabilities in order to make a positive contribution to public policy and government sponsored programs and services, both in terms of fiscal responsibility and program effectiveness.
3. To inform post-secondary institutions with the intent of influencing their existing and

evolving programs for students with learning disabilities, primarily ESF.

4. To inform prospective employers and government departments involved with job training and career and employment issues about the needs and abilities of adults with learning disabilities.
5. Finally, as an overarching goal, to broaden and keep relevant the Ministry of Training, Colleges and Universities' body of knowledge and information, regarding the efficacy of specialized programs and services for students with learning disabilities.

In order to achieve these goals, *Transitions* decided to engage a population of post-pilot participants, and to conduct an annual survey asking questions in the following categories:

1. Education — to assess participants' views about their LOTF and post-secondary experience from a more distant perspective, and if relevant, their current educational involvement.
2. Employment/Career — to investigate the successes and areas of difficulty participants are experiencing in the labour market, and in finding career-related employment.
3. Social — given that a learning disability is a life long condition, and affects areas of functioning other than education and employment, examining social relationships, living arrangements and how participants choose to spend their non-working time is essential to establishing a holistic profile of our population throughout the duration of the study.

II. METHODOLOGY

II. 1. *Transitions* Panel Update

The 2005, the *Transitions* panel had a positive start with the addition of seven new LOTF pilot students, bringing the total number of participants up to 216 for the second phase of the study. Of the 216 participants, 196 completed the second survey and only 20 missed the surveying deadline of August 30, 2005. Mobility was one of the main reasons for this attrition. Six participants moved and did not provide us with their new contact information, which made it very difficult for Research Assistants to contact them.

By the end of the second phase, there were 196 active participants in the study with a gender split of 110 females and 86 males. The average age of our population rose to 26.06 from 25.66 last year. These participants provided updated contact information which should allow for a lower attrition rate for the third round of surveying.

The nature of any longitudinal study is change. This is especially true of the list of contacts from the pilot institutions. A primary goal of *Transitions* is to maintain a current list of pilot contacts in order to keep people informed of the study's progress. This way, we also hope to persuade them to recruit additional former pilot students to participate in the *Transitions* Study.

II. 2. The Surveying Process

The second *Transitions* survey was launched on December 8, 2004, approximately one year after the Intake survey was introduced. We began Year Two of the study with great anticipation and a new survey consisting of 53 questions. The survey was once again made available to participants to complete either online via the *Transitions* Portal or by telephone with a Research Assistant. Mailed surveys were later added as a third method of completing the survey once it became apparent that some participants were very difficult to get a hold of and did not have access to the Internet.

Each year *Transitions* develops an Engagement Strategy to promote survey completion and

combat longitudinal study participant attrition. Nine key goals made up the 2005 Engagement Strategy:

1. E-mail regularly – e-mail reminders were sent to participants, especially "procrastinators" who agreed to complete the survey but needed constant reminders.
2. Portal postings – messages were posted on the *Transitions* Portal to notify participants that the survey was available online.
3. Telephone calls – Research Assistants called participants at various times at their primary contact number if they failed to respond to the email reminders. If participants were unreachable at their primary number, their secondary number or additional contact person was telephoned in an effort to locate the participant.
4. Mail out surveys – surveys were mailed out to participants who were very difficult to get a hold of. An envelope with prepaid postage was also provided to encourage participants to return the survey.
5. Promise of gifts – participants were told that if they completed the second survey they would receive of a Chapters gift certificate or a *Transitions* pen.
6. Thank You cards – sent out to all participants who completed the second survey with personalized notes of appreciation written by Research Assistants.
7. Telephone surveying – Research Assistants called participants — often many times — who did not have internet access or who did not respond to the email reminders to arrange to conduct the survey by phone.
8. Promote the *Transitions* Portal – a great deal of effort was made to invite participants to join into the Trends Discussion on the Portal with a promise of an additional gift.
9. Make 1st Report Available – the entire *First Annual Transitions Report* to the Ministry of Training, Colleges and Universities was made available online from the *Transitions* Portal (**www.transitionsportal.ca**)

Despite this comprehensive Engagement Strategy, it became increasingly more difficult to complete the second round of surveying by our first estimated deadline of June 30, 2005. The deadline was extended until August 30, 2005. In the end, we had 196 completed surveys and with an attrition rate of approximately 10%, it is consistent with the norm for longitudinal research.

Although seven new participants were accepted into Phase II, four participants were lost either because he or she had moved or their contact information was invalid. Altogether 20 participants did not complete the second survey. Seven of these did agree to do the survey but failed to do so by the extended deadline. Nine participants were unreachable or else did not respond to any of our e-mails or telephone calls.

The following section will outline in detail the surveying process and obstacles encountered throughout the second phase of the *Transitions* Study. Overall, we were encouraged by the expression of commitment from the 196 participants who remained in the study.

II. 3. Phase II surveying: Getting Started

In November 2004, in preparation for Phase II of the *Transitions* Study, Research Assistants sent out a general e-mail to all participants notifying them that the second round of surveying was about to begin. Surveying commenced on December 8, 2004 when participants were e-mailed invitations which included their unique token IDs, as well as a link directing them toward the *Transitions* Portal where they could complete the survey online. The e-mail invitations were well received by many participants resulting in a positive number of surveys being completed online within the first couple of weeks. This is partly attributable to the use of the e-mail invitations for the Intake Survey, allowing participants to become familiar with them, thus encouraging eager responses. Some participants even requested to complete the survey by telephone in order to re-establish their contact with a Research Assistant.

Still, we did encounter setbacks. First, there were some participants whose e-mails bounced back either because their addresses became invalid or else their Inboxes were full. To remedy this problem, Research Assistants called these participants to inform them that the second round of surveying had begun, and gave them the choice of completing the survey online or on the telephone. As with the Intake survey, many participants agreed to complete the second survey right then over the telephone.

A second obstacle arose when the telephone numbers for some participants whose e-mail addresses did not work were also invalid. In an attempt to reach them, Research Assistants

called their alternate contacts which included parents, siblings or friends. In so doing, we encountered a third hurdle which was to explain to these alternate contacts, particularly parents, what the *Transitions* Study is, and why we were trying to contact their son or daughter. This proved to be difficult in a number of cases because parents were reluctant to give the Research Assistants their son or daughter's new contact information since they may not have heard of the study before, nor were they familiar with the Research Assistants. In a few cases, parents were enthusiastic to help us and even chatted with the Research Assistants about the participants and what was going on in their lives. These parents were aware of the study and were very glad to see it being conducted. We are now asking participants to familiarize their choice of contact person with the study in order to avoid this dilemma in the future.

II.4. Telephone Surveying

After the second survey was launched and all participants were contacted either through e-mail or telephone, the next step was to get the participants to complete the survey. There was an overall positive response to the e-mail invitations which resulted in many online surveys being completed via the *Transitions* Portal. As the weeks went by however, it became clear that the level of involvement and the number of surveys being completed online had drastically declined. This was especially true between the months of February and April, otherwise known as 'crunch time.' It is during this period when essays, midterms and final examinations are being administered in colleges and universities. Many of our *Transitions* participants are still in their post-secondary studies. Consequently, the level of responses became lethargic by mid-February as our student participants focused on their academic objectives.

In an attempt to regain the momentum, Research Assistants began a "reminder campaign" and started e-mailing and calling participants on a regular basis to encourage them to complete the second *Transitions* survey. This generated the much needed revitalization as another batch of participants completed the survey online, and many requested to have a telephone survey. Some participants, because of their learning disabilities, found the online survey to be difficult and asked for a telephone survey with a Research Assistant.

II. 5. Telephone Surveying: The Interview

Telephone surveys were set up according to the availability of the participants. All efforts were made to accommodate their schedules. As a result, telephone surveys were often conducted during the weekdays and on weekends from early morning until late at night.

However, a couple of obstacles arose when a Research Assistant telephoned the participant on the agreed upon time and date to complete the survey. Often, there was a need to reschedule the appointment because something else had come up or the participant was simply not at home. This of course delayed the surveying process.

The advantage of a telephone survey is that it allows the surveyor to elaborate on or to clarify questions, which results in more in-depth responses. By speaking to participants, the Research Assistants also had the opportunity to get to know them better, and to learn about other aspects of their lives which were not brought up in the survey. This helps to create a stronger sense of goodwill between the participants and *Transitions* staff. We also hope that the Engagement Strategy will enhance the sense of a *Transitions* community as the study progresses. It is always important for the Research Assistant to obtain up-to-date contact information at the conclusion of each telephone survey.

Once a telephone survey is completed, the Research Assistant logs on to the *Transitions* Portal to access the online survey. In order to input the responses, the Research Assistant has to enter in the participant's unique token ID, which is what the study uses to differentiate between participants. In total, 65 participants (33%) out of 195 completed the second survey by telephone, down from 57% in 2004. As the study progresses, the percentage of surveys completed through the Portal is increasing.

II. 6. Online Surveys

The decrease in the number of telephone surveys completed is evidence that the second online survey was easier to complete than the Intake survey. Boris Vukovic, the *Transitions* Portal Administrator, was able to make the online survey more user-friendly and managed to fix many

of the previous problems that participants had experienced during the first phase. As a result, of the 196 participants who completed the second survey, 127 of them (65%) did so online. This is a 22% increase from the Intake survey when only 43% of participants completed the survey online. In the third phase of the study, participants will have the option to save their responses and come back to the survey at a later time.

We can further attribute the increase of online surveys to the convenience factor. As long as the Research Assistants provided participants with their token ID and the web address for the second survey, participants could do the survey at their own leisure and in the privacy of their own homes. Since many of the *Transitions* participants were familiar with using the computer and the Internet, they were more than willing to complete the survey online, though for some participants this process took many email and telephone reminders to achieve.

On average, it took four to six e-mail and/or telephone reminders before the majority of participants completed the survey. By the end of December, 36 participants had completed the survey after receiving the e-mail invitations in the first week of December. For the remaining 159 participants, the surveying process would lag for many months. Although the Research Assistants attempted to contact these remaining participants on a regular basis with e-mails and telephone calls, some participants mistook the e-mail reminders to be junk mail, and consequently deleted them, or the messages automatically went into their Junk Mail folder because the address was not recognized. It was only after the Research Assistants called the participants that we were able to engage participants and rectify the situation.

II. 7. Mailed Surveys

In order to pull in the final procrastinators, the second survey was mailed to select individuals with pre-paid envelopes to facilitate the return mailing. In total, 16 surveys were mailed in the beginning of June 2005, and all of them included a letter outlining the second phase of the *Transitions* Study and the deadline for survey completion. Of the 16 mailed out surveys, five were completed while seven participants told the Research Assistants that they would complete survey either by mail or online. Another four did not respond at all.

Overall, the mailed surveys were not as successful as we had hoped, but for the third round of surveying the Research Assistants do plan on using mailed surveys as part of our engagement strategy. For the third round, they will be mailed out early in the surveying process in order that e-mail and or telephone reminders can soon follow. These mailed surveys will be targeted at participants without e-mail addresses or Internet access and procrastinators who did not complete the second survey on time.

For the third year, a personalized note will be mailed out with a copy of the survey to reluctant respondents from the second year. As well, if participants do not immediately complete the third survey, we will have more time to pursue and engage them.

II. 8. *Transitions* Portal

One of the main purposes of the Portal (**www.transitionsportal.ca**) is to create a sense of community among the *Transitions* participants and staff. The Portal, created and administered by Boris Vukovic, is meant to be a sort of virtual meeting place where participants can get together and share their experiences and views about living with learning disabilities. The Portal provides a useful substitute for face-to-face meetings, which are not possible given the diverse locations of participants, ranging from British Columbia to Nova Scotia.

In November 2005, we launched a ten-week Trends Discussion on the *Transitions* Portal in order to engage participants. Each week, a *Transitions* Trend was posted along with an accompanying question and participants were asked to contribute to the discussion by posting a message on the Portal. Other participants were then invited to comment further. The discussions resulted in an exchange of interesting qualitative information. As an added incentive to contributing to the weekly Trends Discussion, participants were given an engraved *Transitions* pen.

The *Transitions* Portal is also hosting the 2006 *Transitions* Survey and the same procedures as last year will be followed. This includes the use of unique token IDs which have been assigned to all participants. The Portal is constantly being updated with new information about scholarships, employment and resources for people with learning disabilities. We are always

looking for new ways to enhance the Portal and to create more active involvement among the *Transitions* participants. The Trends Discussion has been useful and we will introduce more discussions throughout the coming year.

II. 9. *Transitions* Administrative Portal

In addition to the public *Transitions* Portal there is also an Administrative Portal which is only accessible to *Transitions* staff. This Portal has a variety of functions including the ability to send out e-mails to the participants, keep track of who has completed the survey, export data into an Access database for analysis, and also to provide a manageable way of looking up token IDs. The Administrative Portal was very useful when it came to writing the participants Thank You cards for completing the second survey. Research Assistants were able to specifically look up the individual responses of each participant and to write a personalized note and to include a Chapters gift certificate. The Portal also allows the Research Assistant to update new contact information by editing the participant profile.

II. 10. *Transitions* Database

The *Transitions* Database is essentially a detailed Excel spreadsheet, where all information pertaining to the participants is recorded - from telephone numbers to addresses to small notes about what participants are planning on doing in their immediate future.

The database is the primary resource that the Research Assistants work with in terms of contacting participants, updating their contact information including e-mail addresses and telephone numbers, as well as keeping track of how the surveying process is progressing. The database is colour-coded to distinguish between each participants' status regarding survey completion. For instance, those who have completed the survey will be indicated in a blue font, while those who have agreed to do the survey but have not yet completed it are highlighted in grey. This colour coding system is meant to avoid confusion and overlap in contacting participants for each Research Assistant who uses the spreadsheet. For the purposes of

surveying and organization, the participants were divided into separate groups, and one Research Assistant is assigned to each one.

It is the responsibility of the Research Assistant to contact and engage her own group of participants and to encourage them to complete the second survey. By dividing up the participants it has also helped to promote a sense of familiarity since the same Research Assistant contacts them either by telephone or e-mails to remind them to complete the survey. As such, participants were able to recognize the name of their Research Assistant resulting in fewer deleted e-mail messages and ignored telephone calls.

II. 11. Surveying Wrap-Up

The second round of surveying ended on August 30, 2005, two months later than the first expected deadline. Thank you cards were once again sent out to each participant along with a Chapters gift card, a note regarding the *Transitions* Portal and the *First Annual Report* to let participants know that it was available. The thank you cards were sent out to participants as they completed the survey. This was done to achieve a greater sense of appreciation on behalf of the *Transitions* staff to the participants for completing the survey, and to let them know that the continuation of the study would not be possible without their ongoing input.

II. 12. *Transitions* Trends Discussion

The 16 trends which were identified in the first *Transitions* report were consolidated into nine trends each with a corresponding question, as follows:

- *Transitions Trend #1:* Relationships have endured with staff at former Pilot Institutions. *What was it that Pilot staff did to get such positive reviews years after the fact?*
- *Transitions Trend #2:* Participants place a high value on post-secondary education. *Transitions* participants have a higher retention rate in post-secondary education than the

General Population. *Why do you value post-secondary education to such an extent?*

- *Transitions Trend #3: Transitions* participants combine post-secondary education and work reasonably well, even as they pursue career avenues. *Was it difficult to balance school and work? Do you think it was more difficult for you, compared to your peers without LD?*
- *Transitions Trend #4:* A high percentage (49%) of *Transitions* participants are living with their parents, yet only 17% consider this to be an ideal living arrangement. *Why are you still living at home?*
- *Transitions Trend #5: Transitions* participants have lower salaries than the general population, and may be experiencing under-employment. *Transitions* female graduates are more likely to be under-employed than males. *Do you think that having a learning disability impacts on one's ability/opportunities to be fully employed and be paid equally, as compared to the General Population?*
- *Transitions Trend #6:* PSE (Post-Secondary Education) Leavers employed full-time are generally earning high salaries that are comparable to graduates in the General Population. *Why do you think this is the case for some of those who didn't graduate?*
- *Transitions Trend #7:* The overall unemployment rate of 15% among *Transitions* participants is higher than the general population. *Why is it more difficult for our Transitions participants to find a job?*
- *Transitions Trend #8:* Participants appear to be resilient about their social relationships though this is an area of some concern. *Does your learning disability impact on your social relationships today, and in what way?*
- *Transitions Trend #9:* Generally, former Pilot students are functioning well, since 94% consider themselves to be coping well and not greatly affected by their learning disability. *What are the reasons that such a large percentage of participants are reporting a positive response?*

These nine trends provided the backdrop for our *Transitions* Trends Discussion which began on November 9, 2005 and continued until January 26, 2006. The quotes below typify participants' feelings about both supports received during the LOTF years, as well as the sense of community that *Transitions* is developing:

> *"I think we are the lucky ones and are determined. I know that through university, I had lots of help and support. I don't think I would have been able to gain the knowledge and skills to cope with it in daily life without the support system. I think that as more information is gained on the*

disabilities we have and the ways of coping with them, we have the best rate of achieving our goals."

"I think that having a LD has made me a stronger and hard working person because I have no other choice but to work hard. It makes me very proud to say that I graduated and that I am achieving my goals as an RN. I am even more proud that I overcame the obstacles of learning [attributed to] my LD during school and tackled it head on. I am also grateful to be among the "successful" ones and plan to stay that way for a long time."

"There are so many people out there who go through their entire lives thinking they are just not smart enough and don't finish school or move on to other things [when they just have] a learning difference that has gone undetected, somehow they slipped through the cracks like I almost did. I am so grateful to have come across this Transitions study, it has introduced me to such a great bunch of people who actually have something in common with me."

III. LITERATURE REVIEW

III.1. Overview of primary articles used in this study related to the General Population

Rene Morissette and Anick Johnson. "Are Good Jobs Disappearing in Canada?" Business and Labour Market Analysis Division: Statistics Canada, 2005. 11F0019MIE – No. 239.

Using data about hourly wages from the Labour Force Survey from the 1997-2004 period, this study sets out to assess whether the importance of low-wage jobs and well-paid jobs has changed over this period of time. They find little evidence that the importance of well-paid jobs has declined, and little evidence that jobs paying $10.00 per hour or less have increased in importance in the Canadian economy.

Significantly, however, this study highlights the increasing gap between young workers (under 35) and those who have been in the workforce for years. Importantly, it also shows that within age groups, the wages of newly hired male and female employees (those with two years of seniority or less) have fallen substantially. In addition, in the private sector, a trend of hiring new employees on a temporary basis has risen substantially, from 11% in 1989 to 21% in 2004. The authors suggest that companies benefit by offering temporary jobs to their new employees because it reduces their need to provide defined-benefit pension plans.

Rene Morissette and Garnett Picot. "Summary of: Low-paid Work and Economically Vulnerable Families over the Last Two Decades" Business and Labour Market Analysis Division: Statistics Canada, 2005. 11F0019 – No. 249.

This study analyses fluctuations in hourly wages over the period of 1981-2004. In this period of time, hourly wages have remained remarkably stable, and among employees ages 17-64, median hourly wages remained at approximately $15. However, wages in full-time verses part-time jobs evolved in a very different way. Median hourly wages in full-time jobs rose about 5% while those in part-time jobs fell by 15%. In addition, median wages among newly hired employees has fallen. Median hourly wages for male workers with two years of seniority or less fell 13% between 1981-2004, while among women they fell 2%.

Overall, the proportion of low-paid jobs has been stable in this time period. In 1981, 17% of the jobs held by workers aged 25-64 paid below $10 per hour, and this changed to 16% in 2004. This study theorizes that since the workforce has become better educated and more experienced over the last two decades, one would expect the incidents of low-paid work to fall. However, this was not the case, and within demographic groups like those aged 25-34, the proportion of low wage work increased.

Lev Grossman. "Grow Up? Not so Fast." *Time* Magazine, January 24, 2005.

There is a strong trend among young people today to live at home with their parents well into adulthood, to extend finishing their education, to delay establishing their career, and to avoid or delay committing to permanent relationships. This cover Time magazine article characterizes this twentysomething phenomenon as an extended childhood, a sort of Peter Pan syndrome.

"The years from 18 until 25 and even beyond have become a distinct and separate life stage, a strange, transitional never-never land between adolescence and adulthood in which people stall for a few years, putting off the iron cage of adult responsibility that constantly threatens to crash down on them. They're betwixt and between. You could call then twixters."

Of particular interest to our Transitions panel whose average is 26, is that "the percentage of 26-year-olds living with their parents has nearly doubled since 1970, from 11% to 20%...." In 2004, 49% of Transitions participants were living with their parents, and in 2005 the number had dropped to 39%. As one can see, 39% is much higher than the North American average of 20%. There are extenuating reasons why the Transitions group have chosen to live at home longer than the general population, often related to support and the financial assistance they receive from their parents. Living arrangements are one of several interesting social issues that *Transitions* will observe in the coming years.

Charles M. Beach and Ross Finnie. "A Longitudinal Analysis of Earnings Change in Canada." Business and Labour Market Analysis Division: Statistics Canada, 2004. 11F0019 – No. 227.

This study analyses tax-based longitudinal data collected from 1982-1989. It found that over this period of time there has been a rise in earnings of women, increased polarization of earnings among men, and a significant decline in the real earning of entry level workers (age 20-24) for both men and women. In addition, upward mobility with regard to wages is shown to be significantly higher for male than for female workers, though with some decline in the 1998-1999 periods.

Ross Finnie and Ted Wannell. "The Evolution of the Gender Earnings Gap Amongst Canadian University Graduates." Business and Labour Market Analysis Division: Statistics Canada, 2004. 11F0019MIE – No. 235.

This papers analyses the gender earnings gap amongst Canadian Bachelor's level university graduates. The overall gap, after two years in the workforce, was quite narrow, though it increased five years after graduation, with men earning more over time than women and increased further over time. Women are shown to be overrepresented in disciplines that generally have low earnings: "a large portion of the gender earnings gap amongst recent graduates has been associated with a general tendency for female graduates of a given field of study to have lower earnings than males regardless of the specific nature of their current job characteristics, post-graduation work experience, or personal attributes." (13) A contributing factor may be that men employed full-time work more hours than women, with the gap growing over time. Many more male than female graduates worked very long hours (more than 50 hours per week), with more than one-quarter of full-time employed men working greater than 50 hours per week in every age group, compared to just 17.1% of female graduates. The gap, however, is greatest amongst married graduates with children: married mothers in full-time work averaged at least four hours less work a week than their male counterparts.

Rene Morissette et al. "Relative Wage Patterns among the Highly Educated in a Knowledge-based Economy." Business and Labour Market Analysis Division: Statistics Canada, 2004.

The major finding of this paper is that even though employment grew much faster in the high-knowledge industries in the last two decades compared with other industries, trends in relative wages and real wages of university and high school graduates have displayed similar patterns across industries. However, earnings of university graduates with degrees in engineering, mathematics and computer sciences are higher than those of other university graduates (21). This study also notes that in all private sector industries, young and prime-aged female university graduates have experienced faster wage growth than their male counterparts (23).

Allen, Mary and Chantal Vaillancourt. "Class of 2000: Profile of post-secondary graduates and student debt." *Culture, Tourism and the Centre for Education Statistics Division: Statistics Canada.* 2004. Catalogue no. 81-595-MIE – No. 016.2004.

This research paper includes results from the 2002 National Graduates Survey, which, at the time of this report, is the most current Canadian National study about the transition from post-secondary education to the labour market. The NGS is a longitudinal study that measures the labour market success of graduates from Canadian universities and colleges two and five years after graduation. The class of 2000, surveyed initially at the time of graduation, returned results in 2002 about education, employment, and debt.

Allen and Vaillancourt highlight the complexity of the transition to the labour market after graduation. Despite the myriad of paths chosen by this graduating class, two years after graduation 90% of the class of 2000 who did not return to post-secondary education were employed.

Both university and college graduates were equally likely to be employed; however those with bachelor degrees typically held jobs with higher earnings. Eighty-one percent of both college and university graduates were employed full-time, with 9% of college graduates working part-time and 8% of university graduates working part-time. The unemployment

rate was the same for both university and college graduates in 2002 with a rate of 7%.

The estimated gross annual earnings of 2000 graduates who were working full-time in 2002 were markedly different depending on the level of educational attainment. The median annual earnings for a college graduate was $31,200.00 while bachelor graduates typically earned $39,000.00 annually. Gender does play a significant role when it comes to the difference in salaries between college and university graduates. The median annual earning of a male college graduate was $35,000.00 while the median annual earnings of a female college graduate was $28,600.00 annually, with a difference of $6,400.00. The same is true for university graduates. The median annual earning of a male university graduate was $42,000 while the median annual earning of a female university graduate was $37,000.00 with a difference of $5,000.00. This wage difference is interesting, as Allen and Vaillancourt point out that female graduates were slightly more likely to be employed than their male counterparts two years after graduation, however they were less likely to be working full-time.

Mylene Lambert, Klarka Zeman, Mary Allen, Patrick Bussiere. "Who Pursues post-secondary education, who leaves and why: Results from the Youth in Transition Survey." *Statistics Canada*. 2004. Catalogue no. 81-595-MIE2004026.

This study uses data from the Youth in Transition Survey, a national longitudinal survey which first interviewed Canadian youth aged 18-20 in 1999 with a follow-up in both 2000 and 2002. Emphasis is placed on university education.

Over two-thirds of youth in Canada have gone to either college or university in their early twenties. In general, students who pursue post-secondary education are more likely to be women, single with no children, and they are more likely to have lived with two parents while in high school. Youth who have a strong sense of belonging in high school and who do well in high school are more likely to continue their education.

Fifteen percent of youth aged 20-22 who attended post-secondary left their studies without completing their program. Lack of program 'fit' is the most common reason for leaving

post- secondary, though one in ten youth cited lack of money as the main reason, while only 7% left because they wanted to work. Those who left post-secondary to travel, to change programs, or who just 'wanted a break' were the most likely to return, with return rates of 68%, 47% and 38% respectively. Overall, almost 40% of youth that left post-secondary education at the age of 18-20 had returned two years later.

Though this study reports the 2002 YITS findings, the writers of the report emphasize the ongoing nature of their work, stating: "future cycles of YITS will provide a clearer picture on the completion of post-secondary education….[and] will also allow for an in-depth examination of the labour market outcomes associated with having some post-secondary education…." (20)

Teresa Janz. "Low-paid employment and moving up: A closer look at full-time, full-year workers." ***Statistics Canada*****. 2004. Catalogue no. 75F0002MIE – 2004009.**

The average Canadian who worked full time in 1996-2001 had a 14% probability of being employed with low hourly wages. Low hourly wages is considered less than $10.95 per hour (after tax). Those with a university degree had an 8% probability of experiencing low pay compared to 21% of those with high school or less. Women in the service industry were most likely to experience low wages.

Sex differences remain with regard to annual earnings even when other variables were consistent like age, education, occupation and industry. Women earn significantly less money annually than men, on average $4000.00 - $8000.00 less. Women are more likely to be low paid and less likely to experience upward mobility in the workplace (men experience a 19% probability of low pay while women experience a 34% probability).

Sandra Franke. "School, work and the school-work combination by young people." Housing, Family and Social Statistics Division. Statistics Canada. 2004. Catalogue no. 89-584-MIE – No.3.

This research paper utilizes the General Social Survey and the National Graduate Survey to analyze the time use of high school and post-secondary students when they combine work and study and furthermore how that time use changes upon entry into the labour force.

The transition from school to work has gone from being a simple event to a process, currently estimated to take eight years to complete. The length of this process has an impact on other transitions, like leaving the family home, entering a conjugal union and having children.

One in three young people combine work and study instead of working full-time. Interestingly, the combination of light work and school does not cause men or women to change the amount of time spent on education. Light work has the same effect on men and women, both cut out leisure time, especially socialising and watching television. However, when combining demanding work and school, socialising and leisure and sports become non-existent in the lives of working students. The amount of time spent sleeping also decreases.

Men tend to remain dependent on their parents longer than women, regardless of their employment status. Forty-seven percent of women at the post-secondary level no longer live with their parents compared with 34% of young men.

When the transition from school to work is completed, the time use pattern of young people relieves considerably. A job fills a large portion of the day but much time is left for leisure activities and personal care. Young men make the transition to work earlier than their female counterparts. Employed young men also devote more time to work than young women.

Highlights from the 2003-2004 Ontario University Graduate Survey. **Council of Ontario Universities.**

This executive summary done by the Council of Ontario Universities draws its information from the Labour Force survey of 2002 by Statistics Canada. This survey is designed to describe employment experiences, earnings and skills matches of students who graduated in 2001 from undergraduate university programs.

Two years after their 2001 graduation, 95.8% of graduates from undergraduate degree programs in the province of Ontario were employed compared with a rate of 93.6% six months after graduation. Their average annual earnings two years after graduation was $43,296.00 annually compared with $37,789.00 achieved six months after graduation. Two years after graduation, 85.3% of graduates were working either 'closely' or 'somewhat' related to their field of study, compared with 80.2% six months after graduation.

Provincial Overview of Survey Results Ontario. ***Employment Profile: 2001-2002 College Graduates.*** **Ministry of Training, Colleges and Universities. 2003.**

Of college graduates in Ontario, 57.8% were employed full-time in 2002 with 10.4% employed part-time and 10.2% unemployed. Of those employed part-time 43% say they could not find a full-time job, while 10.7% say working part-time is a personal choice. Forty-four percent of women report working part-time while only 39.7% of men work part-time.

Forty-seven percent of college graduates one year after graduation are employed full-time in a job related to their field of study, with the rate increasing to 51.8% two years after graduation and 61.5% three years after graduation.

The average starting salary one year after graduation is $26,680.00, increasing to $28,779.00 and $34,171.00 two and then three years after graduation.

2001 Census: analysis series. "Education in Canada: Raising the Standard." ***Statistics Canada*****. 2001. Catalogue no. 96F0030XIE2001012.**

According to the 2001 Census, Canada entered the twenty-first century with a population better educated than ever, with 61% of Canadians ages 25-34 having completed post-secondary education. Twenty-eight percent of all individuals in that age group had university qualifications and 21% held college diplomas while 12% had trade credentials. By comparison, in 1991, only 49% of Canadians had completed education beyond high school.

As far as field of study is concerned, the highest number of Canadian graduates had degrees in Education with a rate of 14%. However, an increasing number of students are choosing technology and business fields in 2001 with Engineering and Commerce attracting the most students with 9% and 8% of the population, respectively.

Women accounted for 57% of the growth in university qualifications in the 1990 and similarly in college, women accounted for 59% of graduates. Two-thirds of trade certificates are held by men.

Klarka Zema, Tamara Knighton, and Patrick Bussiere. "Education and labour market pathways of young Canadians between age 20 and 22: an Overview." ***Culture, Tourism and the Centre for Education Statistics Division, Statistics Canada*****. 2001. Catalogue no. 81-595-MIE – No. 018.**

This research paper utilises the Youth in Transition Survey, a Canadian National longitudinal study designed to examine the patterns of major transition in young people's lives, with a focus on education, training and work. It reports the results of youth aged 20-22 in 2001 with regard to education and work.

By age 22, 76% of youth had participated in post-secondary, though only 35% had graduated; this is because many youth at age 22 are still attending post-secondary education, and is not meant to indicate that they have left post-secondary. Eleven percent of

youth in this age group left post-secondary without graduating, though more than 35% of those PSE Leavers at age 20 had returned to school at age 22.

The proportion of youth not in school and not working rose from 10% at age 20 to 14% at age 22. However the authors caution that this "should not necessarily be cause for concern," as many youth leave school to undertake activities outside the labour market such as travelling or volunteering. Unemployment in this age group rests at 3%. The writers of this report emphasise that this report is an initial overview, but that the analysis must be extended over the long-term.

Terman, Lewis M, Robert R. Sears, Lee j. Cronbach, and Pauline S. Sears. "Terman Life Cycle Study of Children with High Ability." Harvard University: The Radcliffe Institute for Advanced Study, Murray Research Centre. www.radcliffe.edu/murray. Murray Archive Date, 1996.

This pioneering longitudinal study began by comparing a teacher-selected group of children with high IQ's from (mostly) urban California with children in the general population to discover similarities and differences. Research continued from 1922 until the present with follow-ups every five years in order to explore the long-term development of gifted children. This is the lengthiest longitudinal study ever conducted.

As the questionnaire devised for young children could not remain the same as the population aged, new series of questions were devised at each five-year interval. The children in 1922 reported on school, interests and reading choices and again on the same in 1936 along with additional questions about life history and family relationships. In 1940 the questions were extended into the areas of the subject's marriage and children and future plans, with similar follow-ups in 1950-1960. From 1972, 1977 and 1982 the questionnaires dealt with problems of older people – retirement, aging etc. Besides the standardized tests (Stanford-Binet Intelligence Test and other intelligence testing from the time) there were also scales, listings and open-ended questions which were coded and recorded.

The Terman longitudinal study highlights the necessity of allowing a panel study of this

kind to evolve and change as the population under question ages and develops. In fact, in 1945, the Terman study, on the request of the participants, sent out a brief two-page questionnaire concerning the effects of military service during World War Two. The broader purposes of longitudinal research, fully understanding the variables present in the life course of participants and the influence of those variables on performance, are best met when the questionnaire is flexible and adapts to allow emerging issues to be isolated and investigated.

In addition, the Terman study overall has a low attrition rate for such a lengthy study. There were 1,528 participants in 1922 and by 1983, 863 participants were still in contact. Though this may initially seem like a low number, we must remember that this study began in 1922 and 410 participants were deceased in 1983. Interesting to note is that only 36 participants voluntarily withdrew from the study and 214 were marked as "unknown" in 1983, which meant there had been no contact since 1977. Though it is difficult to define the attrition rate for this study because of the sporadic response to the numerous follow-ups, what can be said is that in 1982 data exists for 75% of men and 80% of women who are not known to be dead. The Terman study seems to show that hand-picking participants and remaining in contact with them is enough to keep participants involved in a longitudinal study, even for a life-time.

III. 2. Overview of primary articles used in this study on populations of adults with learning disabilities.

Levine, Phyllis, Camille Marder, and Mary Wagner, "Services and Supports for Secondary School Students with Disabilities: A Special Topic Report of Findings from the National Longitudinal Transition Study-2 (NLTS2)," May 2004.

This 10-year longitudinal study is following a population of more than 11,000 youth with disabilities ages 13 through 16. This extraordinarily large population was receiving special education services in grade 7 or above in the 2000-01 school year.

The Individuals with Disabilities Education Act Amendments of 1997 mandate that "…all children with disabilities have available to them a free appropriate public education (FAPE) that emphasises special education and independent living" (IDEA 1997 Final Regulations, Sec300.1a U.S. Department of Education, 1999). This longitudinal study tracks and provides the first national picture of the services and supports provided to secondary school youth with disabilities in a single year. As the study evolves it will provide a far more complete picture as youth develop transition plans, complete their high school programs, and begin to use post-school services and supports. Perhaps most noteworthy for the *Transitions* study, subsequent reports will show how services and supports received during secondary school affect students' long term support needs and outcomes.

Goldberg, Roberta J. et al. "Predictors of Success in Individuals with Learning Disabilities: A qualitative Analysis of a 20-Year Longitudinal Study." in *Learning Disabilities Research and Practice*. 18:4. 2003. pp. 222-236.

Goldberg and colleagues report on their qualitative analysis of interview data collected from a 20-year longitudinal study, earlier presented in Raskind et. al. (1999). Forty-one participants with learning disabilities were involved in this study that traced their progress from childhood to adult life and work. Unlike their previous research where quantitative data was statistically analyzed producing a number of significant success predictors, in the present study, the researchers focused on interview data and qualitative analysis. The main goal was to achieve deeper understanding of these success predictors from an insider perspective. The interviews were two to six hours in length and were conducted by four experienced professionals from the fields of ethnography, clinical psychology, and learning disabilities.

Qualitative analysis of interview data validated previous findings about success predictors and their contribution to specific outcomes for individuals with learning disabilities. More importantly, the researchers gained a deeper understanding of specific cognitive strategies that shaped these predictors (flexibility, anticipating difficulties, breaking down goals into steps, reciprocal relationships with mentors, and recognition of stress triggers). They also identified several new themes, such as the profound influence of learning disabilities in many contexts, and the necessity for continued support throughout their life. Lastly, the

longitudinal nature revealed considerable stability of success predictors from year 10 to year 20, with qualitative data revealing that attributes leading to formation of these predictors began to develop in childhood and remained remarkably stable over time.

The conclusions drawn by the authors are three-fold. First, their position in light of the evidence, demonstrating the impact of a learning disability across many areas of life, is that the field of research and service delivery currently has a very limited scope, focusing primarily on educational contexts. The researchers then argue for a need to broaden the spectrum of intervention strategies to include self-awareness, proactivity, perseverance, goal setting, use of support, and emotional coping. They finally emphasise that these efforts are fully justified by the fact that learning disabilities are life-long conditions, as confirmed by the findings from the present study, and require continuous support from parents, teachers, professionals, and the community.

Madaus, J. W., Foley, T. E., McGuire, J. M., & Ruban, L. M. "A follow up investigation of university graduates with learning disabilities." ***Career Development of Exceptional Individuals,*** **24:2. 2001. pp. 133-146.**

This study represents one of the most recent follow-up investigations into employment outcomes for post-secondary graduates with learning disabilities. The authors surveyed 89 students who graduated from a public university in Northeast United States between 1985 and 1999. The sample came from a pool of students who received special needs services throughout their post-secondary education at this university. The questionnaire used in the survey was developed by the authors who took appropriate measures to ensure content and construct validity, and they also report high reliability at 0.92 and 0.95 for the two scales.

The results support the findings in earlier studies (as reported by the authors) that indicate successful transition of post-secondary students with learning disabilities into the workforce. As shown in the present survey, these individuals are employed at rates comparable to non-disabled graduates. Their full-time employment levels and salaries also exceed those of persons with learning disabilities who have no post-secondary education. Another finding to be noted is that 66% of participants indicated they did not disclose their disability to an employer. The two main reasons reported by those who did not disclose to

their employer were as follows: no need for accommodations and fear of negative impacts on their job security.

The authors stress the importance of the findings showing much higher rates of employment by the post-secondary graduates versus the high-school graduates with learning disabilities. This conclusion is made in light of a significant body of research showing below-average employment success rates for individuals with learning disabilities who did not pursue further education after graduating from high school. While they make a strong argument for the critical importance of post-secondary education for persons with learning disabilities, they also emphasize that all participants in their survey received formal support from the Special Needs Office at the university. The authors also caution about the generalizing findings due to a homogeneous sample - predominantly young, male, and Caucasian - as well as a high national employment rate at the time of the study.

Raskind, Marshall H. Higgins, Roberta J. Goldberg, Eleanor L., Herman, Kenneth L.“Patterns of Change and Predictors of Success in Individuals with Learning Disabilities: Results from a Twenty-year Study,” in *Learning Disabilities Research& Practice*, 14:1. 1999. pp. 35-49.

The exploratory research presented in this article is a part of a 20-year longitudinal study, which followed the lives of 41 individuals with learning disabilities, from their entry into the Frostig Center in California as elementary school children, to adult life, and employment 20 years after leaving the Center. In this article the authors present results of a quantitative analysis of the findings to statistically determine the best predictors of success based on data collected at four points in time during the 20-year period. Data was gathered in multiple ways: records, testing, interviews, and researcher ratings on specific success predictors. The dependent measure of success was based on judgments by four researchers with a high inter-rater reliability of 0.97, as well as specific success domains, at 0.94.

It was found that 21 out of 41 participants rated as ‘successful’. Statistical analysis determined most significant predictors of success to be: self-awareness, proactivity, perseverance, goal setting, presence and use of effective support systems, and emotional stability. The authors note that these predictors were more powerful than traditionally

considered IQ, academic achievement, life stressors, SES, etc. The success predictors identified showed a high level of statistical significance and accounted for a large portion of the variance in participant success (at 75%).

The authors acknowledge that all participants possessed some of the success attributes, but it was the "successful" individuals whose scores on these predictors achieved statistically significant levels. A main recommendation by the researchers concerns the current practices in special education programs that focus mainly on academic achievement. It is argued that more emphasis should be placed on those attributes that demonstrate a high degree of predictive power as demonstrated in the present study.

Levine, Phyllis and Nourse, Steven W., "What follow-up study say about post school life for Young Men and Women with Learning Disabilities: A Critical Look at the Literature." in *Journal of Learning Disabilities,* 31:3. 1998. pp. 212-233.

This paper is a literature review that references and synthesises the important follow-up American studies regarding post-school outcomes for young men and women with learning disabilities. Thirteen studies are referenced on post-secondary education and employment with respect to students who were served and have graduated from special education programs in the United States.

This examination of the literature on learning disabilities embraces the notion that higher education is the best investment for attaining one's aspirations and improving one's status in life. The critical question that is of particular interest to researchers is whether the same opportunities occur for youth with learning disabilities as exist for the general population. More specifically, do students with learning disabilities acquire skills and credentials that significantly improve their job opportunities, wages, level of independence, and quality of life? This question was also of interest to LOTF during its piloting years, and, in fact, it fuelled its determination to follow a cohort of post-pilot students in the form of a longitudinal study.

Levine and Nourse acknowledge that little is known about outcomes, particularly quality of

life outcomes for graduates from special education programs. Consequently, there exists a need to research, to collect both quantitative and qualitative information:

"Despite the proliferation of follow-up studies in the past two decades, the immediate and long-term post-high school and long-term post-high school lives of youth and learning disabilities who were served in special education are not well understood; little is known about the quality of life these individuals experience, how they manage (or do not manage to fit) to fit into their communities, how satisfied they are with their lives, and how their life adjustment compares to that of students who were not identified as requiring special education services." (213)

This review cites studies that provide empirical evidence to demonstrate that, "generally speaking, youth with learning disabilities do less well than their peers without disabilities," a claim that students, parents and professionals have always known intuitively through experience, but whose causes and solutions remain to be explored.

The review concludes that while the attainment of post-secondary education may well hold the key to an enhanced quality of life for students with disabilities, the assumption has yet to be fully proven. The authors recommend further follow-up study in order to, " provide the empirical base necessary to advocate for improvements in service delivery, and… to improve the quality of life for our youth" (213).

Vogel, Susan A, Faith Leonard, William Scales, Peggy Hayeslip, Jane Hermansen, and Linda Donnells, "The National Learning Disabilities Post-Secondary Data Bank: An Overview." in *The Journal of Learning Disabilities*, 31:3. 1998. pp. 234-247.

This study reports on the assessment of support services policies, the proportion of students with learning disabilities and factors that affect differences in proportions in a national sample of American post-secondary institutions. A survey was used to investigate admissions policies, year of initiation of learning disability support services, type and location of support services, eligibility criteria for services and accommodations, the number of students with learning disabilities, and demographic and diagnostic information

available. These factors contribute to a disparity across the U.S. of the percentage of students with learning disabilities enrolled at post-secondary institutions ranging from 0.5% to almost 10%.

This study references an earlier study that is worth noting in view of the subsequent success of the students who participated in the LOTF pilot programs, and more recently, the Enhanced Services Fund and the *Transitions* longitudinal study. As in most studies in the literature, this study is based on the assumption that completion of post-secondary education is the most effective means by which students with learning disabilities can become financially independent. According to Wagner, Newman and Backorby (1993), "3 to 5 years after exiting from high school, only 30% of the students identified with school-identified learning disabilities in the nation had enrolled in a post-secondary program and a discouraging one-half percent had competed a program or earned a degree." Wagner, Newman and Backorby could not have envisioned the *Transitions* panel with comparable progress with the general population.

Raskind, Marshall H, Paul J. Gerber, Roberta J. Goldberg, Eleanor L. Higgins, and Kenneth L. Herman, " Longitudinal Research in Learning Disabilities: Report on an International Symposium." in *Journal of Learning Disabilities* 31: 3. 1998. pp. 266-277.

This article presents highlights from an international symposium on longitudinal research and learning disabilities. Longitudinal research is presented as essential in the field of learning disabilities. According to McKinney (1994), "longitudinal research remains an under-used but powerful tool, in understanding the development of individuals with learning disabilities and its full impact on practice has yet to be realised."

McKinney is further quoted, consistent with the symposium theme, as follows: "[a] major failing is not taking full advantage of the descriptive and explanatory power of the longitudinal method itself. Accordingly, we still lack basic knowledge about the natural history of learning disability. Specifically, we know little about how the various risk factors that have been associated with the disorder interact over time to produce learning disabilities, or how the manifestations of the disorder evolve and change over time as a

function of biologic and environmental factors. Also, we have little direct knowledge that can be applied to prevent or ameliorate the educational consequences of learning disabilities by altering the course of faulty development. Such are the broader purposes of longitudinal research."

Symposium participants noted the problems inherent in conducting longitudinal research, as follows: cost, funding, control group comparison issues, publication record, participant attrition, communication issues, missing data and excessive date. The symposium, somewhat facetiously wondered, "why would anyone want to do longitudinal research in the first place?" given these difficulties.

Nonetheless, longitudinal research with all its inherent difficulties is regarded as essential to a complete and holistic understanding of persons with learning disabilities, as they determined: "[i]n order to provide persons with learning disabilities with the proper opportunities/experiences and determine the most valid treatment/ interventions—in the long run—for promoting life satisfaction and success, we must fully understand the factors/ variables that are predictive of, and affect, specific outcomes. Again, longitudinal studies are essential for making such determinations."

Gerber, Paul J, Rick Ginsberg and Henry B. Reiff. "Learning to Achieve: Suggestions from Adults with Learning Disabilities." ***Journal on Post-Secondary Education and Disability*****, 10:1. 1993.**

Seventy-one adults who all evidenced learning disabilities and who had achieved either moderate or high vocational success were interviewed to obtain valuable information about how they have coped successfully with their learning disability both in childhood and adulthood. The interview process covered six facets of life: vocation, education, family, social issues, emotional issues and daily living.

"The driving factor underlying the success of the entire sample was an effort to gain control of their lives." This study highlights both the internal and external manifestations of attaining control and in this way demonstrates an ecological perspective about the way to

attain success. Internally, it is shown that re-framing the learning disability is central to bind together desire and goal-orientation into a productive process. Externally, coping strategies are shown to be most efficient when the individual is persistent in using them and is in a responsive and supportive environment.

The study insists that service providers for post-secondary students with learning disabilities consider employing an ecological perspective, one that combines internal and external coping strategies. Service providers should insist on integrated approaches "that more accurately reflect the processes used in attaining success." As well, a holistic approach also involves allowing students to speak with other adults with learning disabilities who can relate their pathways to success and their own unique strategies.

IV. Current Impressions of Pilot Prorams

IV. 1. Level of Satisfaction with Pilot Programs

Transitions Trend #1: Participant's current level of satisfaction with LOTF's pilot programs remains high years later. (Continuing)

Transitions participants share one significant experience – they were all part of the LOTF pilot project between 1998 to 2002. In the Intake survey, participants were asked to reflect upon their pilot experience and to rate their current level of satisfaction with the services they received. We found that former pilot students were extremely positive with regard to their pilot experiences. Even more impressive is the fact that participants have continued to make positive comments on their LOTF experience without being asked. As a consequence of regularly receiving unsolicited positive comments, we decided to continue *Transitions* Trend #1 in this report.

IV. 2. Relationships with Staff at Pilot Institutions

Transitions Trend #2: Relationships have endured with staff at former pilot institutions. (Continuing)

Transitions participants often indicated that they remain in touch with former pilot staff. The fact that these comments were unsolicited speaks to the strong relationships formed during the pilot program years. These participants vary in their circumstances - some still attend their pilot institutions, some have graduated and, in some cases, live in different cities, provinces, or countries. For those participants who are still in school and in contact with the staff, it is to be expected because they still require accommodations and services. However, approximately half of the participants in contact with former pilot staff are not

currently studying.

> *"I became really close to them so I often interact with them in a social setting and whenever I am going through a difficult time either in school or in life, I will give them a call and ask for advice."*

This statement speaks to the need for programs to assist with transition into the working world. Clearly it is helpful to students with learning disabilities to have a continuing network to discuss employment concerns, get advice and also to learn about new technologies. This network is what the Portal will hopefully develop into as the study progresses. Interestingly, eight participants are currently employed alongside the staff that once helped them as pilot students.

V. Trends Related to Education

Definitions of terms to be used in the following sections:

Definitions of Post-Secondary Education Status (PSE) as Defined by Statistics Canada

A **PSE Graduate** is someone who graduated from a post-secondary institution and includes both Graduate Continuers and Graduate-Non Continuers

A **PSE Graduate Continuer** is someone who has graduated from a post-secondary institution but has chosen to pursuer further education at a post-secondary institution

A **PSE Graduate Non-Continuer** is someone who has graduated from a post-secondary institution and is no longer continuing to study at post-secondary

A **PSE Continuer** is someone who is currently attending a PSE institution but has not yet graduated

A **Leaver** is someone who has attended a post-secondary institution but is no longer pursuing it and has never graduated from post-secondary

V. 1. Value of Education

Transitions Trend #3: Participants place a high value on post-secondary education. (Continuing)

Trend #3 is impressive since historically post-secondary education was mostly unattainable for adults with learning disabilities. The fact that adults with learning disabilities value higher education speaks to the effectiveness of the pilot programs as well as individual resiliency. In the second phase of the study, this trend continues to hold strong since 45% of *Transitions* participants are currently studying.

:

V. 2. General Education Statistics

In first phase of the study, a significant number of participants were currently studying – 95 of the 210 original *Transitions* participants (45%). We found this number significant for several reasons – to begin with, the average age of our participants was 25.66 in 2004. Also, out of the 95 participants still studying in the first phase of the study, 23 (24%) returned to school after having graduated. We identified these participants as Post-Secondary Education Graduate Continuers, consistent with the Statistics Canada definitions (please refer to page 56).

Notably, in the second phase of the *Transitions* study, 88 (45%) participants reported that they were currently studying. Although the number of current students has declined, the percentage ended up being identical, since the size of the population also decreased between the first and second years. Since the percentage of students studying has not changed over two years, the percentage of PSE Leavers has declined, and the graduation percentage has risen slightly, one can conclude that more participants decided to return to school. This is shown to be true statistically, since the number of PSE Graduate Continuers has increased, with 34 (35%) deciding to return to school after graduation.

Out of the 88 participants who were in school when they completed the second *Transitions* survey, 65 (74%) were studying full-time and 23 (26%) were studying part-time. Fifty-nine

(67%) were attending university, which is logical since it takes longer to complete a university degree than a college diploma. Twenty-eight (32%) were attending college, and one participant was (1%) finishing a correspondence course.

Seventy-six (86%) of the participants currently studying were registered as a student with a disability with the Special Needs Office or with the Enhanced Services Program. Eleven (14%) current students had not registered as a student with a disability at their institution, and in looking at the majority of their comments, it was evident that they neglected to register/identify for mainly positive reasons. Eight participants felt that they did not require supports in school any longer, showing the same kind of resiliency that we witnessed in the Intake phase of the study. Only three expressed negative reasons for not registering, such as not liking the services offered or not being aware how to register. Some of the positive comments are listed below:

> *"I did not register as a student with disability, since I can achieve all the expectations without any accommodations."*
>
> *"I felt that I did not need to identify myself in this program and would not need any extra help."*
>
> *"I wanted to try my luck without the title."*
>
> *"I've developed ways to manage my LD with school work."*

V. 3. Accommodations and Assistive Technology

Out of the 88 participants currently studying, 77% are currently using accommodations and 23% have chosen not to. For those who are using accommodations, the most common ones mentioned, both in the Intake phase and for the second phase, are listed below:

- Extended time for tests and exams
- Note-taking
- Private and quiet room for tests and exams
- Use of computer or adaptive technology for tests and exams
- Opportunity to tape lectures or receive the instructor's lecture notes

- Scribes to read and/or record at exams
- Extra time to complete written assignments
- Tutors
- Rescheduled test or exam times

When asked if the accommodations they are using are the same ones they used in the pilot program, 82% reported that they are. In fact, one participant was very complimentary to the LOTF pilot program, commenting that: *"Almost all that I use now I learned in the pilot project."*

The majority, 45%, of those participants not currently using accommodations have made this choice either based on personal confidence or because the nature of their program (i.e. online or distance education courses or a more practical or 'hands on' program) does not require the use of accommodations. Ten percent of students said the reason they did not have accommodations is because those required were not available at their current school. Below are a few explanations of why some former pilot students opted not to use accommodations:

> *"I don't need them now I have picked a job that I am good at and it is not affected by my LD. I self-advocate for my needs."*

> *"I'm doing well on my own now with exams and tests, although it still is a challenge to write them, but it's been okay so far…I used to have a note-taker, but now I ask a friend to help me take notes and it's worked out fine."*

> *"I haven't used accommodations for two years now because they are not a big help for me. I wonder if I didn't go to college first to get the skills I have, if I would have made it this far in university, and I probably wouldn't have. At Loyalist, they taught me how to fish rather than just giving me the fish."*

In terms of assistive technology, 51% of participants presently studying responded that they do use it and 49% reported that they do not. Those who do use assistive technology mentioned the following devices as especially helpful:

- Read and Write
- Kurzweil 3000

- Dragon Naturally Speaking
- Text-to-Voice software
- Palm Pilot
- Inspiration software

Of the 49% who do not use assistive technology, 65% feel that it is not necessary, mostly due to the nature of their current program of study, 4% wish they could use assistive technology but cannot afford it, and 11% do not think that it is helpful to them at all. For instance, one participant commented: *"It is better for the learning process if I take my own notes, also the only major assistance I feel I need is extra time."*

V. 4. Field of Study

The following table reports the number of participants in each discipline as compared to the fields of study data in 2004:

Field of Study	# of participants in 2004	# of participants in 2005
Social Sciences	36	19
Education	0*	16
Arts	16	12
Business	13	7
Sciences	6	6
Computers	5	4
Hospitality/Tourism	5	5
Engineering	3	4
Math	3	1
Healthcare/Medical	3	7
Architecture	2	2
Trade	2	3
Media	1	1
Total	95	88

*Diplomas/degrees in the education field were placed in the Social Sciences category in 2004

Transitions Trend #4: Transitions participants have a higher than average retention rate in post-secondary education than in the general population (Continuing)

In terms of fields of study, the figures from 2005 are comparable to 2004 in almost every discipline. The one exception is that since there were a considerable amount of *Transitions* participants pursuing a degree or diploma in education – 5 working towards a Bachelor of Education degree, 1 studying to be a Learning Strategist, 1 completing a diploma to become an Educational Assistant, and 6 becoming certified in Early Childhood Education – we decided to create a separate category to highlight this trend. In the Employment section of this report, salary ranges and fields of study are compared to highlight trends in that area.

V. 5. Post-Secondary Education Continuers

The Intake phase of the *Transitions* study, performed in 2004, revealed that 45% of the population was still in school. This was a surprising finding, seeing as the LOTF pilot programs had ended in 2002 and we were expecting a greater number of participants to have graduated. Consequently, the participants who have not yet graduated and are still in school, termed PSE Continuers, were asked this question: *"If you have not yet graduated and are currently studying, are you still in the program you were in as a pilot student?"* Of the 88 participants currently studying, thirty-six (41%) are still pursuing the program of study they began as a pilot student and eighteen (20%) decided to switch programs for reasons that will be outlined below. The remaining 35 current students (39%) have already graduated and are pursuing further education.

The thirty-six students pursuing the same program they began as a pilot student were asked why, and their reasons were varied. The survey provided them with a list of reasons and they could choose more than one:

- Financial reasons
- More time required to graduate because of my learning disability

- Difficulty deciding what career to pursue
- Love of education
- Other

Twenty-two percent were still in the same program simply because that is the duration of their diploma or degree and they started in the pilot program in its last years. Others have a co-op component to their program which lengthens the time it takes to graduate. Eleven percent are in the same program due to financial reasons, such as having to work a lot or not being able to receive student loans: *"I had to take a leave because I couldn't get OSAP."* Five percent reported that the reason they were in the same program was because they had difficulty deciding what career to pursue and 27% attributed it to a love of education. Interestingly, 53% responded that they remained in the program they began as a pilot student because they required more time to graduate due to their of their learning disability. This participant's comment reflects a common situation for post-secondary students with learning disabilities: "*I have one more year to go before graduating because I'm doing school on a part-time basis."* It is for this reason that in the second phase of the *Transitions* study we decided to probe more deeply into student debt.

Of the eighteen PSE Continuers who were not in the same program they started as a pilot student, eleven (61%) chose to switch programs because their interests changed. Such was the case with this *Transitions* participant:

> *"In my second year, I began to understand what my strengths and weaknesses were. In order to increase my academic performance I switched into a degree major, that was a better "fit" with my learning style, capabilities, ambitions and interests."*

Five (28%) participants switched their program of study because their coursework became too difficult due to the nature of their learning disability:

> *"I chose to switch into Drama because I was at first a History Major and with such an emphasis on written expression I was fighting my learning disability the entire time and was not enjoying my university experience. I knew that I did very well in presentations and decided to stitch to Drama where there was less emphasis on writing and more on presentations."*
>
> "*Last year I was not prepared for the amount of reading required and method of studying in*

Intro to Psych. After failing two exams I dropped it and received higher marks…as I took my English courses I realized where my aspirations lay and I was planning on applying for the creative writing program which I will do soon."

"The program (pre-health) involved too much math, and it was getting too difficult to continue with it."

Each of the participants who had to switch programs because of their learning disability ended up enrolling in a program that suited their learning styles much better. Instead of leaving school without completing their coursework, they made a switch and persevered. The remaining two (11%) participants decided to switch programs when the program itself changed.

Lastly, the PSE Continuers were asked whether or not they intend to pursue further post-secondary education after graduating. Twenty-seven (50%) PSE Continuers responded affirmatively, eighteen (33%) stated that further education was a possibility, and nine (17%) reported that they definitely would not pursue school after graduation. Among the PSE Continuers who answered 'yes' and 'perhaps,' 16 mentioned graduate school, five expressed interest in a Bachelor of Education program, one in Law School, and one in Medical School. It will be interesting to see in the third phase of the study which of the PSE Continuers will gain admission into their post-graduate programs of interest, particularly as the number of *Transitions* participants returning to school after having graduated is growing.

V. 6. Further Education Trend: PSE Graduate Continuers

As was mentioned, PSE Graduate Continuers increased in 2005, with 34 (35%) deciding to return to school after graduation. Since we did not expect to find a trend regarding PSE Graduate Continuers, the Intake survey did not probe the reasons why they decided to return to their studies. Accordingly, in the second survey we asked some specific questions to those who had already graduated and were in the process of obtaining a second diploma or degree, or planning to do so in the near future. In the study's second survey, we asked PSE Graduate Continuers: *If you have graduated and are currently studying again, why did you choose to return to school?* The PSE Graduate Continuers were given the following forced-answer choices and the opportunity to elaborate further:

- To increase employment opportunities and obtain a better paying job
- Love of education
- To specialize more in my field
- I do not know what career to pursue
- School is a safe environment for me
- To obtain professional qualifications (i.e. B.Ed., L.L.B., M.D.)
- To shift career direction
- Other

Almost half (47%) of the PSE Graduate Continuers responded that they had pursued further education to increase employment opportunities and obtain a better paying job. For instance, one respondent wrote: *"I am working on a second diploma in architectural technology which would give me more responsibility and a higher ranking in my career."* Twenty-three percent of the PSE Graduate Continuers chose to further their education to specialize more in their respective fields. One participant is looking to obtain a PhD. and several others are currently completing Master's degrees.

Interestingly, 21% of PSE Graduate Continuers said that a love of education caused them to pursue further studies. These motivations for pursuing further education are all significant since, as the last and current reports indicate, school is consistently the most challenging aspect of *Transitions* participants' lives.

The fact that a rising number of former pilot students are pursuing second diplomas and degrees speaks to a high level of resiliency with respect to the most challenging area of these individuals' lives. Of the PSE Graduate Continuers, eight (23%) chose to further their education to specialize more in their respective fields. For example, one participant wrote that he is looking to obtain a PhD. and is are currently completing his Master's degree. Only one (3%) participant selected the option that she does not know what career to pursue. Four (12%) PSE Graduate Continuers reported that they chose to remain studying because school is a safe environment for them. One participant elaborated on this reason: "*I find the imposed structure of the university environment very helpful*."

Eleven (32%) participants returned to school after having graduated in order to obtain professional qualifications, five of whom are pursuing a Bachelor of Education. *"I never wanted to pursue a career in what I graduated in – I just didn't know what to take. Now I know where I want to go in my career but I must take more schooling to arrive there."*

In the hope of probing this trend, we will again be inquiring about the PSE Graduate Continuers' specific motivations for returning to school as well as asking how long it took them to return: immediately after graduation, one year after graduation, or more than one year after graduation. This way, we can observe the educational trend alongside the participants' employment history.

In the *First Annual Report*, the third *Transitions* Trends read as follows: *Participants place a high value on post-secondary education*. This trend continues in the second phase, particularly with regard to graduates returning to post-secondary studies to accomplish a variety of educational and employment-related goals. We project that the number of PSE Graduate Continuers will continue to increase since seven percent of those who are currently graduated have expressed interest in furthering their education. Therefore, a new trend in education may soon be: *An increasing number of Transitions participants are pursuing further education after graduation*. Judging from the fact that eighty-three percent of PSE Continuers answered either 'yes' or 'perhaps' when asked if they intend to pursue even further post-secondary education in the future, it is likely that the percentage of our panel returning to study after graduation will continue to rise.

V. 7. Post-Secondary Education Leavers

Transitions Trend #5: Transitions Leavers cite inability to pass required course as most common reason for not graduating, whereas general population Leavers cite employment. (New Trend)

In the Intake survey, we observed that 22 (10%) of all *Transitions* participants left their programs without graduating, which was notably lower than in the general population at 15%

(Allen "YITS" pp. 6-9). Accordingly, *Transitions* Trend #7 in the 2004 report indicated that: "*Transitions participants have a higher than average retention rate in post-secondary education than in the general population*." In the second phase of the *Transitions* study, the percentage of PSE Leavers in our population dropped slightly, with 18 (9%) of all 196 participants leaving school without graduating.

In the general population, PSE Leavers are more likely to be male. In last year's report, we noted that in the *Transitions* population, this statistic is reversed, with 13 of the 22 PSE Leavers reported last year being female. That trend holds true for this year, with 11 females (61%) and seven males (39%) who reported leaving school without graduating.

In the second survey, we probed into the motivations and future plans of the PSE Leavers with some specific questions. PSE Leavers were first asked to choose the reason that best described why they left school without graduating from the following categories:

- did not enjoy what I was studying
- cannot decide what I want to do
- found employment and decided to leave school
- could not afford to pay tuition, books, etc.
- could not pass all of the required courses to obtain degree/diploma/certificate
- Other

The PSE Leavers were able to select the options that best suited their situation, and the results were intriguing. Four PSE Leavers (22%) indicated that they did not enjoy what they were studying, two (11%) could not decide what they wanted to do, and five (28%) could not afford to continue their studies (unable to pay for tuition, books, etc.). Three PSE Leavers selected 'other', for reasons of pregnancy (11%) and injury (5%), and nine (50%) indicated that they could not pass the required courses to graduate. Though the numbers are small, it is important to find out why *half* of the PSE Leavers did not graduate from their program of study. As is evident in the following quote, some PSE Leavers may not yet fully understand their reasons for leaving:

"I was supposed to finish up my co-op hours but I couldn't at that time because work got in the

way plus some other stuff. After that I meant to go back I guess I just procrastinated too much."

Perhaps the *Transitions* survey will provoke some PSE Leavers into working through issues and following through with educational goals.

Significantly, only one (5%) of the PSE Leavers left to pursue employment opportunities, which is the most common reason in the general population for leaving school without graduating. The fact that half of the PSE Leavers cannot complete the courses necessary to graduate decreases the chance that they will decide to return to post-secondary education. Consequently, we directed this question to PSE Leavers: Do you plan on returning to school in the near future? In response to this query, eight participants (44%) indicated that they do plan to return to school in the near future, while ten (56%) indicated they had no plans to return to school.

Of those PSE Leavers who plan to return to school, three (38%) indicated they wish to return to get the degree, diploma, or certificate they were originally working towards. In addition, four (50%) indicated their wish to begin a new program in order to pursue a desired career. One (12%) participant indicated she wished to return to school but did not know what to pursue. Three PSE Leavers indicated they would begin school again in Summer or Fall 2005, two intend to return to their studies in one to two years, and three are uncertain as to when they will return.

Of those PSE Leavers who do not plan to return to school, three (30%) were unsure what they will pursue in school, while three (30%) others indicated that they would rather continue working. Two PSE Leavers expressed negative feeling towards education in general. Two Leavers specified financial concerns as the reason they will not to return to school, with one offering this explanation: *"I am unable to complete what I was studying (time limit). I must pay OSAP $4500 before I can get anymore assistance and I already owe $38000!"* It is because of receiving responses like this that we decided to ask questions about student debt reported in the financial section to follow.

In the third *Transitions* survey, we will be asking PSE Leavers some of the same questions about their education, including: the reason they left school without graduating, if and when they plan to return, and what program interests them if indeed they do plan to return to school.

In addition, we will be inquiring into the PSE Leavers' needs in order to gauge how post-secondary institutions can successfully re-integrate PSE Leavers with learning disabilities into their former programs. To begin to look at this, we have composed the following qualitative question for *Transitions* PSE Leavers: What do you feel you need to do to ensure that you successfully graduate? We hope to see the percentage of PSE Leavers continue to decrease over the course of the longitudinal study.

V. 8. Graduation

When the *Transitions* participants were first surveyed in 2004, 115 had graduated from an Ontario post-secondary institution. By the second phase, in 2005, 124 have graduated. Only nine more *Transitions* participants graduated between the Intake phase and the second phase of the study.

"Primary" Graduation Statistics

Hereafter, participants who have graduated for the first time will be referred to as having graduated with a "primary" degree/diploma/certificate. Twenty-three participants graduated once, returned to school, and have recently graduated with another degree/diploma certificate and will be referred to as having graduated with a "secondary" degree/diploma/certificate.

Of the 124 primary graduates, five graduated with certificates, 34 with degrees and 85 with diplomas. The chart on the following page features a list of the pilot institutions and those participants which have graduated from each institution with their primary degree/diploma/certificate.

"Primary" Graduation Stats by Pilot Institution

Pilot Institution	# of "primary" graduates as of 2005
Conestoga College	19
University of Guelph	7
York University	3
Trent University	15
Canadore College	18
Fanshawe College	9
Loyalist College	14
Georgian College	16
Cambrian College	10
Nipissing University	7
Total	118*

By 2004, 112 of the 115 graduates had received a degree, diploma, or certificate from a former pilot institution. The three participants who did not graduate from a pilot institution attended the following schools after their involvement with the pilot programs: Sir Sanford Fleming College, Wilfrid Laurier University, and Seneca College. By 2005, 118 of the 124 graduates have received a primary degree, diploma or certificate from their pilot institutions. *Our participants also graduated from Sir Sanford Fleming College - 1, Wilfred Laurier University - 1, George Brown College - 1, St. Lawrence College - 1, and Seneca College - 2.

Of the 34 participants with primary degrees, 20 are female and 14 are male. A closer gender divide exists for participants with primary diplomas. Of the 85 participants with primary diplomas, 47 are female and 38 male. More males than females have primary certificates, with four men and one woman.

"Secondary" Graduation Statistics

Of the 23 secondary graduates, 4 graduated with certificates, 8 with degrees and 11 with

diplomas. Of the 23 participants with additional qualifications five females and three males obtained further degrees. Additional diplomas were earned by five females and six males, as well as three females and one male earning additional certificates.

The following table features a list of the institutions from which our participants have received secondary certifications.

"Secondary" Graduation Stats by Institution

Institution	# of "secondary" graduates as of 2005
Conestoga College	1
York University	1
Canadore College	3
Fanshawe College	2
Loyalist College	1
Georgian College	4
Nipissing University	5
Humber College	2
St. Lawrence College	1
University of Ottawa	1
Queens University	1
EASI University of Southern Maine	1
Total	23

We thought it important to also describe additional qualifications of those who have pursued a secondary degree/diploma/certificate. In our female secondary graduate population, we found that four with primary degrees went on to get another degree, while two with primary degrees went on to get a diploma and a certificate respectively. For our female secondary graduates with primary diplomas, we found one went on to get a degree, four received additional diplomas, and two received certificates. No females with primary certificates have received a secondary qualification.

In our population of male secondary graduates, we found that one with a degree went on to get another degree, and another with a primary degree received a secondary diploma. For our male secondary graduates with primary diplomas, two went on to receive degrees, four diplomas, and one certificate. In the male population there was one man with a primary certificate who went on to get a secondary diploma.

Expected Graduation

Those participants presently in school were asked when they expected to graduate. Of the eight-eight currently studying, 34 (39%) participants planned to graduate in 2005, 26 (30%) planned for 2006, 11 (12%) expected to graduate in 2007 and nine (10%) planned for 2008. Eight (9%) respondents were uncertain about when they will graduate. Consequently, we anticipate that the graduation rate will rise drastically in the third phase of the *Transitions* study.

Graduation and Employment

Graduation statistics are particularly crucial, as education qualifications play an important role in our breakdown of the salary of *Transitions* participants. Of the 124 *Transitions* participants who have graduated, only 90 (72%) primary and secondary graduates are PSE-Graduate Non-Continuers, while the rest are continuing their schooling (28%). Of those who are not continuing in school, 61% are employed full-time, which is an increase from the *Transitions First Annual Report* figure of 48%. Further information about graduates in the workforce can be found in the Employment section of this report.

V. 9. Studying and working concurrently

Transitions Trend #6: Transitions participants combine post-secondary education and work reasonably well. (Continuing)

In 2004, 45% of *Transitions* participants were studying and 40% of those studying were combining work and school. In the *First Annual Report*, the following trend was established: *Transitions participants combine post-secondary education and work reasonably well, even as they pursue career avenues*. However, since some respondents assumed that summer employment was included we decided to re-phrase the question in order to achieve more accurate data. In the second survey, we inquired as to whether those who are presently studying were working in a paid job *while attending classes*, either full time (35 hours or more per week) or part-time (less than 35 hours per week).

In 2004, 41 participants, or 53% of those currently studying, were also working, which correlates with Sandra Franke's finding that in the general population 65% of males and 49% of females combine work and school (Franke, p.48). Of those 41 participants working and studying concurrently, 39 (44% of those studying) are working part-time (13 males and 26 females) and 8 (9% of those studying) are working full-time (4 males and 4 females). Those working part-time while studying work an average of 16.8 hours per week and those working full-time while attending school work an average of 39.6 hours per week. A thirteen percent increase in the number of participants successfully combining work and school tells us that the trend is stable.

In the Intake phase of the study, 34% of the panel reported that they had had a co-op placement. As a result, we decided to take a closer look at this area and ask more directed questions about their motivations to enrol in a co-op program. Since *Transitions* is focused on employment, we wondered if co-op was helping them find work. In the second survey, eight percent of those studying were also registered in a co-op program. The seven participants involved in co-op were asked their reasons why they took co-op: four (57%) stated that they wanted to obtain relevant work experience, two (29%) said they took co-op to earn money, three (43%) wished to try out a job in their field of study, and six (86%) said that co-op is required for their program. In the same vein, 11 (13%) current students were completing a non-paying internship

or placement in the second year – four (36%) were doing a practicum placement for their Bachelor of Education degree, three (27%) were doing an internship related to their Arts degrees, one (9%) participant was doing a placement for her Early Childhood Education diploma, one (9%) was doing a clinical psychology placement, one (9%) was doing a placement for an Educational Assistant diploma, and one (9%) was doing a placement in preparation for becoming a midwife.

In 2004, 43% of all participants had done volunteer work, but only those who were currently studying were asked. Therefore, in the second survey, both those presently studying and those not studying and working were asked if they were currently doing volunteer work. An impressive number of *Transitions* participants currently studying reported that they volunteered as well – 77, or 88% of those currently studying. The students volunteer an average of 6 hours per week. The percentage of participants who volunteer and are working but not studying was much lower, with 22 or 20% of those working but not studying.

V. 10. Living Arrangements

Transitions Trend #7: A high percentage of Transitions participants are living with their parents. (Continuing)

In the Intake survey, we asked about living arrangements, and were surprised to learn that half of our population lived at home. In 2004, 49% of participants were currently living with parents, and a corresponding trend was established as follows: *A high percentage of Transitions participants are currently living with their parents*. In the second survey, we decided to probe why almost half of our participants were still living at home, particularly with the average age being 26.06.

We found that the percentage of participants living with their parents had decreased by ten percent – one year later, 39% are living with their parents. Still, this percentage is high, particularly relative to the general population where only 20% of adults of a similar age live at

home. Twenty-one percent of participants currently living with their parents state that it is their preferred living arrangement, while 17% have stated that they are still dependent upon their parents. Four percent said that they live with their parents due to cultural reasons, yet perhaps what is most significant is the primary reason given by those who live with their parents. Eighty-one percent of the 39% who are living with their parents do so for financial reasons. Not surprisingly, 51% of the panel reported that they have accumulated student debt, a statistic which will be expanded upon in the next section.

The remaining 119 (61%) participants reported on their current living arrangement as follows: 41 (34%) are living with a spouse or partner, 26 (22%) are living with friends, 18 (15%) are living with other family members (aunts, uncles, grandparents, children, etc.), 15 (13%) are living alone, 9 (8%) are living with roommates who are not friends, 7 (6%) are in residence at their schools, 1 (1%) is in a group home and 1 (1%) is boarding. When asked if they were satisfied with their current living arrangements, 141 (72%) of *Transitions* participants reported that they are satisfied. Forty-eight (62%) of those presently living with their parents said it was preferred, though for some, there is ambiguity and the likelihood of future change:

> *"I am in a transition period right now, I like being dependent on my parents and at the same time I am feeling the need to grow and start a life with my boyfriend independently."*

> *"I am twenty three years old and still living with my parents. Although this is socially acceptable I would prefer not to be dependent on them."*

V. 11 Financial Issues

New to this round of surveying were questions about student debt. One hundred (51%) of the 196 respondents reported that they have accumulated student debt. The amount of debt was reported as follows:

Student Debt

Amount of Student Debt Incurred	% in debt
Under $5000	15%
$5000 - $10,000	17%
$10,000 - $15,000	15%
$15,000 – $20,000	19%
$20,000 - $25,000	7%
$25,000 – $30,000	9%
$30,000 - $40,000	10%
$40,000 - $50,000	4%
Over $50,000	4%

In addition to asking about the range of their student debt, we asked participants what effect their debt had on their life at this time. Approximately one-half of the one hundred who have incurred debt stated that it has a great effect on their life, while the other half reported that it had little to no effect. Here are some comments representative of those who feel negatively impacted by student debt:

> *"Yes, it does affect me because my computer doesn't work now and I can't afford to get a new one. It was one of my supports which was useful to me because I have dyslexia. Now I can't afford to buy a new computer which is a hundred times faster than mine but costs thousands of dollars."*

> *"It can get very challenging. I don't ever feel like I can get ahead with any saving, its all going towards some type of bill."*

> *"A job in a field I have worked towards in pretty slim, furthermore my career success will be directly limited by my disability. These factors naturally increase the debt I will carry, by time*

and interest."

It was evident from the majority of participants' comments that the effects of student debt are far-reaching. Some participants mentioned the stresses of supporting a family while going to school and working or not being able to focus as well on schoolwork because of the necessity to work. Others said they must live with their parents when they would rather not be, or talked about having difficulty making ends meet. Some reported being unable to do the things they wanted to such as travel or buy a home or go back to school.

We often attribute difficulties with post-secondary education to having a learning disability. We should perhaps consider that issues such as financial stress may affect our panel as much as having a learning disability. Consequently, a new trend that may emerge is: *Financial stresses are significantly impacting on Transitions participants' lives*. In the third phase of the study, we will look more closely at student debt and its effect on participants' lives.

V. 12. Concluding Notes for Education Section: What is Next?

In the third *Transitions* survey, there will be a focus on all four education categories and each will have a specific set of questions so we know why participants are making educational choices:

PSE Graduate Non-Continuer - Not currently studying and graduated

PSE Leavers - Not currently studying and not graduated from any program

PSE Continuer - Currently studying and not graduated from any program

PSE Graduate Continuer - Currently studying and has graduated in the past

These sets of questions will give us a better idea about the motivations and future educational plans of each group. We will be probing the perceived preparedness of each of the four groups regarding employment. Perhaps a future goal of Special Needs offices at Ontario's colleges and universities will to better prepare this population for the employment world in addition to equipping them with education-related skills. Former pilot students have demonstrated a unique

resiliency in education and we hope this trend will carry on into the employment world as more and more participants graduate within the next few years.

VI. Trends Related to Employment

Please note: Information on the general population outlined in the Employment section of this report comes from three major sources. The first is the National Graduates Survey (NGS). This longitudinal study measures the labour market success of graduates from Canadian Universities and Colleges two and five years after graduation. The class of 2000, surveyed initially at the time of graduation, returned results in 2002 about education, employment, debt, and living arrangements. This is the most current National study about the transition from school to work as of the date of this report. At the provincial level, the 2003-2004 Ontario University Graduate Survey and the 2001-2002 Ontario College Graduate Survey are the most recent inter-institutional reports on the transition from school to work.

VI. 1. Salary and *Transitions* Participants

In our *First Annual Report*, we recorded 121 (58%) of 210 participants were employed as of July 31, 2004. Currently, 142 (72.4%) of 196 participants are employed. The following are highlights from our recent employment data. Figures are calculated out of the total number of 196 participants:

- combine work and school: 53 (27%)
- are no longer in school and employed full-time: 65 (33%)
- are no longer in school and employed part-time: 18 (9%)
- are no longer in school and unemployed: 19 (10%)
- no longer in school but did not specify full-time or part-time work: 6 (3%)

In comparison with the broad employment statistics from the *First Annual Report*, there has been an increase in students combining work and school (38 last report, 53 this time), though no notable difference in numbers between those who are employed either full-time or part-time (66

full-time last report, 65 currently; 17 part-time last report, 18 currently). However, there has been a decrease in the number of participants who are no longer in school and are unemployed (31 last report, 19 currently).

We have again chosen to discuss primarily the salaries of participants who are working full-time and not studying, as they currently represent those who have made the fullest transition to the workplace, PSE Graduate Non-Continuers and PSE Leavers. This population makes up 33% of currently employed *Transitions* participants.

Salary Ranges for Participants no Longer Studying

Annual Salary Range full-time	#	%
Less than $5000	1	2%
$5000 - $10,000	3	5%
$10,000 - $15,000	3	5%
$15,000 - $20,000	11	17%
$20,000 - $25,000	9	14%
$25,000 - $30,000	12	18%
$30,000 - $35,000	8	12%
$35,000 - $40,000	7	10%
$40,000 - $45,000	5	7%
$45,000 - $50,000	3	5%
$50,000 - $60,000	2	3%
Over $60,000	1	2%
Total:	65	100%

** Six participants who are no longer in school and who are employed did not indicate a salary range and for that reason are not included in these calculations.*

In order to more fully understand the financial status of our participants, in the *Second Annual Report* we reduced the salary range on the survey to $5000 increments. This has greatly increased our ability to compare the salaries of *Transitions* participants with the general population, which was our intention. However, this has made it difficult to compare this year's salary figures with those of last year. In order to facilitate comparison, the chart below features the salary ranges from *Transitions* 2005. This year's results are not

markedly different.

Comparing Results: *Transitions* participants' salary 2004 and 2005

2004 Salary Ranges	2004 Number (#)	2004 Percentage (%)	2005 Number (#)	2005 Percentage (%)
< $20,000	14	21%	18	26%
$20,000 - $34,999	32	48.5%	29	45%
$35,000- $49,999	15	23%	15	23%
$50,000- $64,999	5	7.5%	3	5%
$65,000 - $89,000	0	0	0	0
Total:	66	100%	65	99%

Though there appears to be a higher percentage of participants earning in the less than $20,000 range, as well as a lower percentage of participants earning in the $20,000 - $34,999 salary range, this difference may be attributed to survey attrition, and we will not consider this a notable trend at this time. However, as the results between surveys are so similar, we may conclude that compared with the general population, *Transitions* salary figures are currently still lower. Thus *Transitions* Trend #8 remains valid.

Transitions Trend #8: Transitions participants have lower salaries and are under-employed compared to the general population. (Continuing)

In order to have a clearer picture of how each segment of the employed population is faring in relation to the general population, it is necessary to separate the employed *Transitions* participants into the PSE Leavers and the PSE Graduate Non-Continuers who are employed full-time, as was done in the *First Annual Report*.

VI. 2. Post-Secondary Education Leavers

Last year we reported that only 22 (10%) of all *Transitions* participants left their programs without graduating. Thus, our *Transitions* population had a lower post-secondary attrition rate than the general population, which is 15% and consists of predominantly males (Allen "YITS" pp. 6-9). This *Transitions* Trend #9 remains valid this year, however with a decrease in the number of PSE Leavers in the *Transitions* population, and also with a high rate of PSE Leavers returning to post-secondary education.

This year only 18 (9%) participants reported themselves to be PSE Leavers, versus 22 (10%) reported last year. Of last year's reported 22 PSE Leavers, 13 continue in that category. Nine Leavers (50%) returned to post-secondary education. Five of this year's Leavers (27%) dropped out of post-secondary education in 2005.

Of this year's PSE Leavers, 15 are currently employed, while only three are unemployed. This is a significant decrease in unemployment in this population. Last year, eight Leavers reported being unemployed. Of the 15 Leavers who are employed, 10 are employed full-time and five part-time.

In the general population, PSE Leavers are more likely to be male. In last year's report, we noted that in the *Transitions* population, this statistic is reversed, with 59% of the 22 PSE Leavers reported last year being female. That trend holds true for the reduced population of Leavers this year, with 11 (61%) females and seven (41%) males.

Transitions Trend #9: PSE Leavers employed full-time are generally earning salaries that are comparable to graduates in the general population. (Continuing)

Though the number of Leavers is less this year, it is still useful to look at the annual salaries of full-time employed *Transitions* PSE Leavers. Last year, we noted that employed Leavers were receiving high salaries comparable to graduates in the general population.

Annual Salaries of *Transitions* PSE Leavers

Annual salary for full-time PSE Leavers	Male	%	Female	%	Total	%
$5000 - $10,000	1	10%	2	20%	3	30%
$10,000 - $15,000	0	0	1	10%	1	10%
$15,000 - $20,000	0	0	0	0	0	0
$20,000 - $25,000	0	0	1	10%	1	10%
$25,000 - $30,000	1	10%	3	30%	4	40%
$30,000 - $35,000	0	0	0	0	0	0
$35,000 - $40,000	1	10%	0	0	1	10%
Total full-time PSE Leavers:	3	28%	7	71%	10	100%

Last year, of the PSE Leavers who were employed full-time, six Leavers (54%) reported salaries in the $20,000 - $34,999 range, so there is a slight decrease in this category this time with only five participants (50%) earning in that salary range. There is no marked change in those earning above $35,000 in this group. One Leaver (10%) earned in this range compared with last years' two Leavers at 14%. As well, there is a slight increase in those earning less than $20,000 annually, with three Leavers (27%) last year and four Leavers (40%) this year earning in that salary range. As these figures remain mixed, we have decided to corroborate *Transitions* Trend #9 and report that this year PSE Leavers employed full-time are generally earning salaries that are comparable to graduates in the general population, though we have chosen to remove the word "high" from this trend, as the salary range is quite broad, with too small a population to report any significant percentage in one salary range.

What are these Leavers Reasons?

Specific questions on this year's survey were targeted towards PSE Leavers. The first addresses the reason that those who left school did so without graduating. Participants were able to indicate more than one reason why they left school without graduating. Responses were as follows:

- Could not pass all of the required courses to obtain degree/diploma/certificate: 9
- Could not afford to pay tuition, books etc: 5
- Did not enjoy what I was studying: 4
- Cannot decide what I want to do: 2
- Found employment and decided to leave school: 1
- Other: 3

VI. 3. PSE Graduate Non-Continuer Statistics

A total of 124 participants surveyed have graduated from post-secondary education at least once, an increase of nine participants since 2004. These graduates will be referred to as having graduated with a "primary" degree/diploma/certificate. Twenty-three of these participants graduated, returned to school, and have also graduated with another degree/diploma certificate and will be referred to as having graduated with a "secondary" degree/diploma/certificate.

Of the 124 primary graduates, five graduated with certificates, 34 with degrees and 85 with diplomas. Of the 23 secondary graduates, 4 graduated with certificates, 8 with degrees and 11 with diplomas.

Of these graduates, only 90 (72%) of the 124 primary and secondary graduates are PSE-Graduate Non-Continuers, while the rest are continuing their schooling, 28%. Of those who are not continuing in school, 61% are employed full-time, which is an increase from the *Transitions* 2005 figure of 48%.

As salary is what is being assessed in this section, the question of where to place those who have graduated with a secondary degree/diploma/certificate was raised. We have decided to rank secondary qualifications by the qualification that typically results in the highest paying job, beginning with degree, and moving to diploma, and certificate. Thus, if a participant graduated first with a diploma and then with a degree, for salary purposes, they are in the degree category. However, if someone graduated with a degree and then received a certificate,

though those extra qualifications will no doubt be helpful for getting a job, the salary will still be assessed by the qualification that statistically pays the most, a degree.

Status of PSE Graduates for salary evaluation

Graduates	Degree	%	Diploma	%	Certificate	%	Total	%
In school	17	46%	16	19%	1	25%	34	27%
Full-time	12	33%	40	48%	2	50%	54	44%
Part-time	4	10%	10	12%	0	0	14	11%
Unemployed	4	10%	11	13%	1	25%	16	13%
Total	37	99%	77*	92%	4	100%	118*	94%

** six participants with diplomas who state that they are currently employed did not specify either full-time or part-time work. Percentages in the diploma category are still calculated out of the total number of those with diplomas who are employed, 84. Additionally, the final total of graduates is 124, and thus percentages in the "total" column are taken out of 124.*

VI. 4. PSE Graduate Non-Continuer Salary Statistics

Similar to last time, we feel that it is the salaries of the PSE Graduate Non-Continuers working full-time that may be the best indicator of the success of *Transitions* participants in the workplace.

Annual Salaries of Full-time PSE Graduate Non-Continuers

Annual salary full-time	Degree	%	Diploma	%	Certificate	%
Under $5000	0	0	1	3%	0	0
$5000 - $10,000	0	0	0	0	0	0
$10,000 - $15,000	0	0	2	4.5%	0	0
$15,000 - $20,000	4	33%	8	20%	0	0
$20,000 - $25,000	1	8%	4	10%	0	0
$25,000 - $30,000	3	25%	5	13%	1	50%
$30,000 - $35,000	1	8%	5	13%	1	50%
$35,000 - $40,000	0	0	7	17%	0	0
$40,000 - $45,000	1	8%	4	10%	0	0
$45,000 - $50,000	1	8%	2	4.5%	0	0
$50,000 - $60,000	0	0	2	4.5%	0	0
Over $60,000	1	8%	0	0	0	0
Total full-time:	12	98%	40	99.5%	2	100%

In order to analyze PSE Graduate Non-Continuers properly, this group has been divided into three categories:

- University versus College Graduates
- Field of Study
- Gender

University Graduates

It continues to be the case that in the general population college and university graduates are equally likely to find work, though university graduates generally have higher earnings. The median earnings of university graduates across Canada two years after graduation are $39,000 (Allen "Class of 2000" p. 12). As is reported on the chart below, the highest percentage of our university graduates (33%) are markedly under-employed compared to their peers in the general population, earning between $15,000 - $20,000 annually.

Salary of Full-Time University Graduates

Annual Salary Range full-time	University Graduates	%
$15,000 - $20,000	4	33%
$20,000 - $25,000	1	8%
$25,000 - $30,000	3	25%
$30,000 - $35,000	1	8%
$35,000 - $40,000	0	0
$40,000 - $45,000	1	8%
$45,000 - $50,000	1	8%
$50,000 - $60,000	0	0
Over $60, 000	1	8%
Total full-time:	12	98%

However, though we reported last time that the highest percentage of university graduates were earning less than $20,000 annually, due to the reduced salary ranges, this time we are able to see that our university graduates are at least earning at the highest end of that salary range. However, these earnings are still significantly below the provincial average for university graduates. The 2004-2005 Ontario University Graduate Survey reports that six months after graduation the average annual salary of graduates from undergraduate degree programs in 2002 was $36,951 annually (increased from 2004: $37,789) and after two years was $43,578 (increased from 2004: $43,296) annually.

Due to the large salary range of $20,000 - $34,999 annually utilized in the last report, we were unable to say accurately how many of our participants fall below the 25th percentile earnings of

the general population. Again, significant is the fact that due to the decreased salary ranges, we can now see that the majority of our PSE Non-Continuing university graduates are earning below the 25th percentile of the general population, which rests at $31,000 annually for university degree graduates two years after graduation. Eight of our university graduates, or 66%, are earning below the 25th percentile of the general population as noted in Trend # 8.

In the *First Annual Report,* we indicated that there are two factors which may determine why the salaries of *Transitions* university graduates are so low. The first factor was that the national salary figures we are comparing our population to are for two years after graduation, and we speculated that the reason 66% of our graduates had been earning low salaries may have been due to just entering the workforce.

We can see on this report that it does indeed seem to be the case that new graduates, whether with primary or secondary degrees are earning less than those who have been in the workforce longer, with the notable exception of the participant earning over $60,000 annually as an environmental biologist. For exact figures, see Appendix #1 on page 120.

We can see that of those participants who have been graduated the longest, two are on par with the average provincial earnings two years after graduation ($43,296), while two fall below this average earning. As well, it is worth noting that the four participants earning in the $15,000-$20,000 range have not yet been graduated for two years, though all salaries, even of the two earning $30,000-$35,000, still fall below the provincial earnings average for university students six months after graduation.

A recent trend in a Statistics Canada report published in 2005 notes that the wages of newly hired (two years of seniority or less) male and female workers have fallen substantially, and the percentage of new employees employed in temporary contract positions has risen substantially from 11% in 1989 to 21% in 2004. (Morissette “Good jobs disappearing” p.6.) In particular, employees with one year of seniority or less are more likely to be doing temporary work (increase from 14% in 1989 to 25% in 2004) (Morissette p. 7). Morissette points out that a likely reason is that due to intense competition within industries and from abroad, many companies have cut wages to entry level employees in order to maintain the wages of workers with greater seniority (Morissette 21). What this means for *Transitions* participants is not yet certain, though this may be a reason many of our new university graduates are earning less than

those who have been out of school longer. However, this still does not explain why our graduates are earning less than the general population of graduates, who must also be suffering due to lack of many good entry level positions. Lower earnings also depend on the type of work being performed by graduates. See Appendix #2 on page 121 for exact details.

Wage patterns have been increasing in high-knowledge industries but not increasing in low-knowledge industries. This may explain why the wages of graduates working in the retail industry fall into the lowest earning range of this group. As well, the education field is paying these new graduates very little compared to the average salaries of other high knowledge fields. Lack of high demand for teachers in Ontario may have something to do with the low salaries of these graduates.

The second factor we indicated as having an influence on the low salaries of our graduates was field of study. Field of study may have something to do with these low salaries, and will be analyzed after first looking at the salary rates of College Graduates.

For a qualitative and subjective perspective of University graduates we asked participants whether they consider themselves to be under-employed. We defined under-employment as *being employed at a level lower than your education and experience warrants*. Seven participants with primary degrees consider themselves under-employed. One participant with a diploma and a degree in Environmental Science who is currently earning $25,000 - $30,000 working in retail states:

> *"With my education, I should be earning about 40-50 thousand/year, or even higher. I also am underemployed because my current job does not utilize my skills and education. Very repetitive job. Low level of skills."*

Five participants with primary degrees do not consider themselves under-employed, even two earning between $15,000 to $30,000 annually. These participants had no comment as to why they do not consider themselves under-employed.

Thus, with seven graduates (58%) considering themselves under-employed, and seven *being* under-employed and 36% *extremely* under-employed (less than $20,000 annually), there seems to be a discrepancy between what our population of university graduates consider to be under-

employment, and what the national and provincial statistics indicate.

College Graduates

While the median earnings of university graduates in the general population two years after graduation across Canada was $39,000 annually, the median earning for someone with a college degree in the general population was $31,200 (Allen "Class of 2000" p. 12.)

As demonstrated in the chart below, 20 of the 40 participants with diplomas who are working full-time are earning less than the average in the general population, with 28% (11 participants) demonstrating earnings below $20,000 annually. However, an equal number of participants (50%) with college diplomas *are* earning the average salary for the general population or above. We were unable to say this was the case on the last survey due to the broad salary ranges.

Salary of Full-Time College Graduates

Annual Salary Range full-time	Diploma	%	Cert.	%
Less than $5000	1	3%	0	0
$5000 - $10,000	0	0	0	0
$10,000 - $15,000	2	4.5%	0	0
$15,000 - $20,000	8	20%	0	0
$20,000 - $25,000	4	10%	0	0
$25,000 - $30,000	5	13%	1	50%
$30,000 - $35,000	5	13%	1	50%
$35,000 - $40,000	7	17%	0	0
$40,000 - $45,000	4	10%	0	0
$45,000 - $50,000	2	4.5%	0	0
$50,000 - $60,000	2	4.5%	0	0
Over $60,000	0	0	0	0
Total full-time	40	99.5%	2	100%

Like our university graduates, many *Transitions* college graduates are well below the national

median annual earnings of college graduates in the general population. The national 25th percentile of college graduates earns $24,000 annually. Twenty-four of those with college diplomas are above this 25th percentile, which indicates that 60% of those participants with college diplomas are not severely under-employed. We were unable to accurately assess this in the last report due to the broad salary ranges.

On a provincial level, the 2001-2002 Provincial Overview of Survey Results of Ontario college students shows that the average annual salary of a college graduate employed in a full-time job related to their field of study is $31,040. Though this survey shows that 87.2% of college graduates are employed, only 73% are employed full-time and of those employed full-time, only 54% are employed in a related field. Therefore, as noted in our last report, though the survey criteria for the Provincial and National surveys regarding college graduates' salaries were different, the reported earnings were remarkably close: $31,200 as the median of the National study and $31,040 for the average earnings in the Provincial Study.

Since the national trend toward low wages and temporary positions for recent entrants into the workforce holds true for college graduates, it is important to look at whether those earning lower salaries are doing so because of having recently graduated. See Appendix #3 on page 122 for exact details.

It does not seem to be the case for college graduates, as it is for university graduates, that those who are in the workforce longer are earning higher salaries. Though the highest salaries are indeed being earned by those with diplomas who have been out of school for more than one year, there is one participant who graduated with a second diploma in 2004 who is earning $40,000 -$45,000 annually. Conversely, there is a graduate who has been out of school since 1999 who is earning between $15,000 - $20,000 annually and one who has been out of school since 2002 who is earning under $5000 annually at a full-time job (seasonally employed).

Again the field of employment varies more within our group of college graduates. A chart which indicates what type of work each college graduate is performing is available in Appendix #4 on page 123.

In the case of college graduates, retail, restaurant/hospitality and childcare/recreation appear to

be the lowest paying jobs, as well as education - a fact consistent with the statistics for the general population in those fields. The highest paying jobs are in automotive industries, health care, construction/factory/trade, youth councillor, and office/administration, all fields where salaries vary and it is difficult to make assessments about whether these are starting or continuing salaries, though all but one participant earning above $40,000 annually has been out of school for at least one year.

One final thing to consider for college graduates is whether or not they consider themselves to be under-employed. A surprisingly small number of college graduates, 14 participants (35%) consider themselves underemployed. However those who consider themselves under-employed do so for various reasons, and within different salary ranges.

One participant earning $35,000 - $40,000 annually, a good salary for this group, considers herself under-employed for the following reason:

> *"I think I am being underused. I would like to be doing more based on my education."*

One participant earning $30,000 - $35,000 annually as a laundry valet manager comments that she is underemployed due to disability: *"I started at this company in a higher management role and for some reason was demoted due to disability."*

Twenty-six college graduates (65%) do not consider themselves under-employed, though like our population of university graduates, there is a discrepancy between what the participants consider under-employed and what national and provincial data considers under-employment. One participant, for example, employed full-time in Childcare-Recreation for $10,000 - $15,000 annually said: *"I am employed at the right level for my education and even though I think I should be earning more in salary I don't consider myself under-employed."*

Overall, it again appears that college graduates are faring better in the workplace than university graduates in the *Transitions* population. This finding may or may not be substantiated over time, but currently it can only be stated that this trend remains consistent between surveys.

Field of Study

As indicated in the first report, *Transitions* Trend #9 (now Trend # 10), field of study strongly influences the overall low salaries of *Transitions* PSE Graduate Non-Continuers. We believe this is because many were in the Arts and Social Sciences whose average annual earnings are lower than the earnings of those in professional programs.

The average salary six months after graduation of a student with a university Bachelor of Arts degree working full-time in Ontario in 2003–2004 was approximately $32,249, and for a college arts graduate it was approximately $27,237 annually. The average salary of graduates from the Social and Behavioural Sciences working in Ontario was between $26,000.00 - $28,000.00 for college graduates and $35,000.00 for bachelor graduates.

By comparison, the average salary for an architecture or engineering graduate was $51,540 for university graduates and $38,000 for college graduates (*OUGS* and *2001-2002 College Graduates*).

Transitions Trend #10: Field of study likely influences low salaries of Transitions participants. (Continuing)

As indicated in the first report, a high number of *Transitions* participants who are employed full-time are employed in their field of study. Participants were again asked to answer the question: Does your current employment match with your program of post-secondary study and career aspirations? Of the 54 participants currently employed full-time 36 (67%) indicated that they are employed in their field of study, while 17 (31%) indicated they are not working in their field of study nor currently meeting their career goals.

Gender

As many studies conducted by Statistics Canada concerning annual wages and salary consider gender a determining factor, we believe it is important to consider gender when looking at the salaries of *Transitions* participants. There are indications that gender could end up being significant when trying to understand why so many of our participants are under-employed.

Women in the general population make significantly less money annually than men do – usually between $4000 - $8000 less. Fifty PSE Graduate Non-Continuers, or 55%, are female.

We reported last year that of the 12 university graduates who were working full-time, eight (67%) were female and four (33%) were men. This round, of the 12 university graduates working full-time, seven (58%) are female and five (42%) are male. Last survey, of the 42 college graduates with diplomas working full-time, twenty-seven (63%) were female and 15 (35%) were male. This year, of the 40 graduates with college diplomas working full-time, 24 (60%) are female, and 16 (40%) are male. In the last report, both college certificate holders were male, whereas in the second year report one is male and one is female.

Transitions Trend #11: Female Transitions graduates are more likely to experience high rates of under-employment than male participants. (Continuing)

Due to the broad salary figures on the last survey, we were unable to definitely determine whether female graduates were under-employed relative to their male counterparts, though *Transitions* Trend # 11 indicated that female graduates were more likely to be under-employed than males. With the reduced salary figures this year, we can now report that 19% of female graduates are significantly under-employed (less than $20,000 annually) while only 7% of male graduates are significantly under-employed. Therefore, *Transitions* Trend # 11 has been adjusted to: *Transitions* female graduates experience higher rates of under-employment than male participants. The following two tables detail the difference between male and female salaries of graduates employed full-time.

Annual Salary of Female Graduates Employed Full-time

Annual Salary Range full-time	Deg	%	Dip.	%	Cert	%	Total	%
Less than $5000.00	0	0	1	3%	0	0	1	2%
$5000.00 - $10,000.00	0	0	0	0	0	0	0	0
$10,000.00 - $15,000.00	0	0	1	3%	0	0	1	2%
$15,000.00 - $20,000.00	3	25%	6	15%	0	0	9	17%
$20,000.00 - $25,000.00	0	0	3	8%	0	0	3	6%
$25,000.00 - $30,000.00	1	8%	2	4.5%	1	50%	4	8%
$30,000.00 - $35,000.00	1	8%	4	10%	0	0	5	10%
$35,000.00 - $40,000.00	0	0	3	8%	0	0	3	6%
$40,000.00 - $45,000.00	1	8%	1	3%	0	0	2	4%
$45,000.00 - $50,000.00	1	8%	1	3%	0	0	2	4%
$50,000.00 - $60,000.00	0	0	2	5%	0	0	2	4%
Over $60,000.00	0	0	0	0	0	0	0	0
Total M+F:	12	57%	40	62.5%	2	50%	52	63%

Annual Salary of Male Graduates Employed Full-time

Annual Salary Range full-time	Deg	%	Dip.	%	Cert	%	Total	%
Less than $5000.00	0	0	0	0	0	0	0	0
$5000.00 – $10,000.00	0	0	0	0	0	0	0	0
$10,000.00 - $15,000.00	0	0	1	3%	0	0	1	2%
$15,000.00 – $20,000.00	1	8%	2	4.5%	0	0	3	6%
$20,000.00 - $25,000.00	1	8%	2	4.5%	0	0	3	6%
$25,000.00 – $30,000.00	2	17%	2	4.5%	0	0	4	8%
$30,000.00 – $35,000.00	0	0	2	4.5%	1	50%	2	4%
$35,000.00 – $40,000.00	0	0	3	8%	0	0	3	6%
$40,000.00 - $45,000.00	0	0	3	8%	0	0	3	6%
$45,000.00 – $50,000.00	0	0	1	3%	0	0	1	2%
$50,000.00 - $60,000.00	0	0	0	0	0	0	0	0
Over $60,000.00	1	8%	0	0	0	0	1	0
Total M+F:	12	41%	40	40%	2	50%	52	40%

Gender and University Graduates

The median annual salary of a female university graduate in the general population remains $37,000 annually for a full-time worker, whereas the median salary for a full-time employed male university graduate remains $42,000 annually.

We can see that one (8%) of our female graduates is earning in this salary range of $40,000 - $45,000 annually, though two (17%) earn just below in the range of $30,000 – $35,000 and one (8%) earns in the salary range above, $45,000 -$50,000. Consistent with the first report, there is one (9%) male university graduate earning above the $25,000-30,000 salary range, with a salary of over $60,000 annually.

Thus, we have no reason to conclude from this round of surveying that there is any significant gender difference in terms of university graduate salaries, except to again note that there are more women under-employed (earning in the $15,000 - $20,000 salary range) than men.

Gender and College Graduates

The median annual salary of a female college graduate in the general population is $28,600 annually, whereas a male college graduate's full-time salary is $35,000 (Allen "class of 2000" p. 31.).

We can see that 11 females with college diplomas (28%) earn less than $25,000 annually, the closest estimate we can get to $28,600.00, which falls mid-range of $25,000 – $30,000. Thus the three women in that range have not been counted. Six men with college diplomas (15%) earn less than $28, 600 annually.

Thus unlike for university graduates where gender differentiations have somewhat levelled out, for those with college diplomas, gender does still appear to be a factor, with many more women under-employed then men.

However, it is worth noting that seven women and seven men earn above the college-male average yearly earnings of $35,000 annually. This does seem to indicate that while some women do fall behind in salary compared to men with college diplomas, many are faring equally well, and are exceeding average earnings for women in the general population.

Gender and the Unemployment of Graduates

PSE Graduate Non-Continuer Unemployment by Gender

Unemployment	Degree	%/19	Diploma	%/65	Certificate	%/3	Total	%/87
Female	1	5%	3	5%	0	0	4	5%
Male	3	16%	8	12%	1	33%	12	14%
Total:	4	21%	11	17%	1	33%	16	19%

**The unemployment rate on this chart is taken from all PSE Graduate Non-Continuers including those who work part time. Overall unemployment rate for PSE Graduate Continuers is 20% while overall unemployment rate for all participants is 10%.*

Though the overall unemployment rate for PSE Graduate Non-Continuers has shrunk since the last report from 25% to 20%, the majority of those who are unemployed remain male at 14% versus 5% for females.

In the last report, we speculated that the higher male unemployment rate indicated that males were experiencing more of a problem with transition to the workplace. However, due to the small sample size, it was impossible to extrapolate a definitive result, which is again is true for this report.

VI. 5. Unemployment and *Transitions* Participants

***Transitions* Unemployment Rate**

Unemployment	Degree	%	Diploma/ Certificate	%	Leavers	%	Total	%/196
Female	1	1%	3	1.5%	1	1%	5	3%
Male	3	1.5%	9	5%	2	1.2%	14	7%
Total:	4	2.5%	12	6.5%	3	2.2%	19	10%

** unemployment percentages on this chart are calculated out of all 196 Transitions participants*

Transitions Trend #12: Transitions participants have a high unemployment rate. (Continuing)

Transitions Trend #12 in the 2004 report indicated that with an overall unemployment rate of 15%, the rate of unemployment among *Transitions* participants was higher than that of the general population. This year, at the rate of 10%, this remains true, as the unemployment rate of university and college graduates in the general population is 7% (Allen "Class of 2000" 28). However, at 5% lower, the new unemployment rate may indicate that many participants who were previously unemployed have resolved some of their difficulties with the school-to-work transition, or returned to school for additional training.

Comparative Unemployment figures for PSE Graduate Non-Continuers and PSE Leavers:

2005 Unemployment

36% of university graduates

30% of graduates with college diplomas

33% of graduates with college certificates

18% of PSE Leavers

2004 Unemployment

21% of university graduates

17% of graduates with diplomas

33% of graduates with certificates

36% of PSE Leavers

In the *First Annual Report,* we noted that only 6% of the unemployed population reported having no future work/career plans, but that the majority of participants were job planning and actively preparing for the future. This is evidenced by the fact that 11 participants who were unemployed in 2004 are now employed, and five returned to post-secondary in 2005.

Only 12 participants who were unemployed in 2004 remain unemployed in 2005, and only seven new participants report being unemployed.

The seven newly unemployed participants, when asked about their future plans, were positive about either returning to school or pursuing employment.

The 12 participants who have struggled most with the transition from school-to-work are less optimistic about their job prospects and life in general. Two express a definite desire to find work in their field, one is working toward better health, and four say that they are unsure what path they are going to take at this time. Three expressed a clear desire to return to school, while the remaining are very pessimistic about their job opportunities and the future in general.

Though the unemployment rate has dropped for *Transitions* participants since 2004, the frustration expressed by those who are consistently unable to find a steady source of income remains a concern.

VII. General Trends Related to Learning Disability

VII. 1. Overall population is a high functioning cohort of individuals

Transitions Trend #13 in the first report indicated that former pilot students were coping well and not greatly affected by their learning disability. While in the 2005 survey we did not ask in general if their learning disability had a great, moderate or small affect on their life, we did ask again in which area they felt their learning disability affected them most and least. The answers we received were encouraging. When asked in what area their learning disability *most* currently affects them, participants responded generally as follows:

- 123 Education (62%)
- 20 relationships (10%)
- 53 Work (27%)

Data collected from the 2004 survey suggested that the majority of participants were most affected by their learning disability academically (74%), followed by employment (19%) and relationships (7%). That the 2005 numbers show very little difference percentage-wise in these categories indicates that *Transitions* Trend #13 remains valid this year:

Transitions Trend #13: Transitions participants' learning disability remains most challenged by academic and employment issues. (Continuing)

When asked in what area their learning disability *least* affects them, participants responded generally as follows:

- 18 Education (9%)
- 131 Relationships (67%)
- 47 Work (24%)

Challenges

The participants were asked to list their current challenges or obstacles as relates to learning disability, with answers listed below:

- Writing: 46 (23%)
- No current challenges related to learning disability: 31 (16%)
- Memory: 20 (10%)
- Reading: 20 (10%)
- Graduating: 17 (9%)
- Time management: 13 (6%)

It is very encouraging to note that the second highest response was 16% of participants indicating that they have no current challenges related to their learning disability. In 2004, only 8% of participants responded that they had no current challenges. It was also encouraging that only 6 participants (3%) responded by answering that they had low self-esteem, and as well encouraging that only 6 (3%) responded that their learning disability was holding them back in their job search.

Supports

The participants were asked to list their most significant supports and the list is similar to the last report. This year we rephrased the question to include supports only related to their learning disability, and to exclude mention of family members and friends, though some participants did still include these. Significant, is the fact that the highest percentage of participants indicated that they did not use any supports right now. Listed are the most popular supports only.

- No current supports related to learning disability: 41 (21%)
- Computer: 34 (17%)
- Adaptive software: 19 (10%)

- Organizer/PalmPilot: 18 (9%)
- Tutor/coach: 14 (7%)
- Extra Time: 12 (6%)
- Spell-checker: 11 (5.5%)
- Family 8 (4%)
- Friends/Partner: 9 (4.5%)
- Learning Strategist 6 (3%)

VII. 2. Self-Advocacy and Resiliency

In the second survey, we defined resiliency as "the competencies and abilities that some people possess which enable them to cope in the face of significant adversity and risk" and we found that the *Transitions* population as a whole is quite resilient.

Life Goals

Transitions Trend #14:Transitions participants place great emphasis on educational and career goals, while social goals rate relatively low. (New Trend)

The desire to be successful among people in this age group, and particularly for participants with learning disabilities, is easy to understand. But the question remains, will education and career choices compromise success with personal satisfaction and life balance?

One important way of assessing resiliency in our participants is to find out what their life goals are. Thirty-three percent of participants have listed a career-oriented goal such as getting a job, moving up within a company or beginning a small business. Twenty-one percent expressed academic goals like graduating, returning to school or pursuing additional qualifications.

Fourteen percent of participants indicated that they had social goals such as getting married, having children, and beginning a family as social goals. Those who listed financial goals cited getting out of debt and supporting parents as major goals, with 5% of the population referring to these as future objectives. Travel and general happiness ranked at 2.5% and 8% of the population respectively, with those who are still deciding on their goals coming in at 13%.

- Career-oriented goals: 33%
- Academic goals: 21%
- Social goals (i.e. Getting married, having children): 14%
- Well balanced life: 8%
- Financial goals: 5%
- Travel: 2.5%
- Still deciding: 13%

VII. 3. Impact of Learning Disability on Social Life

In order to understand how our participants engage in their social life we asked participants how they choose to spend their free time. Sixty participants (31%) responded that they prefer to spend their free time alone, while 136 (96%) prefer to spend their free time with others. This is similar to the general population where 61% of people prefer group activities to 38% who prefer solitary ones (2003 General Social Survey).

Participants were able to answer in more than one category. These are the most popular leisure time activities:

- Hobbies: 61%
- Arts: 16%
- Sports/exercise: 38%
- Clubs: 10%
- Religious groups: 7%

- Volunteering: 23%
- Other: 30%

In the 'other' category 18 participants (9%), say they spend their spare time watching television or playing computer games, 10 participants (5%) say they spend time with their family (often their own children), seven (3.5%) like to read, seven (3.5%) spend time with friends, five (2.5%) prefer to study, while two do housework and two do "nothing." As participants were able to write any answer in this 'other' category, this list is not definitive.

Our participants show greater prevalence toward physical activities than the general population where only 29% of individuals versus 38% for our group (2003 General Social Survey). However, religious group participation is lower among our participants with only 7% participating versus the Canadian average of 16.7% (2003 General Social Survey).

In noting their current level of satisfaction with friends, relationships and family members, participants were forced to select from six options. With regard to friendships, the majority of participants, 141 (71%) reported that they are satisfied or very satisfied with their friendships.

- Very Satisfied: 50 (25%)
- Satisfied: 91 (46%)
- Somewhat Satisfied: 38 (19%)
- Not Satisfied: 9 (5%)
- Very Dissatisfied: 5 (2.5%)
- No friends: 3 (1.5%)

An exact comparison cannot be made between our cohort and the 2003 General Social Survey of Canada findings on the friendship issue. Our survey asks participants to indicate their level of satisfaction and the general survey asks respondents to indicate the number of friends. That being said, one equivalency between these two surveys exists in the number of participants who report having no friends. In the *Transitions* group 1.5% reported being friendless while in the general population the figure was slightly higher at 1.9% overall.

When asked to rate their current level of satisfaction with relationships, including spouses/ boyfriends/girlfriends, the response was somewhat different, with 'no relationship' being the most popular answer at 70 participants (36%). Due to the age group of our participants, this does not seem uncommon and is not a good enough indicator that our participants have difficulty with romantic relationships. However, that 101 participants (51%) are satisfied or very satisfied does indicate that many of our participants are doing very well romantically. Clearly, to establish a pattern with regard to our participants social life, we are going to need to observe change over time.

- Very Satisfied: 55 (28%)
- Satisfied: 46 (23%)
- Somewhat Satisfied: 12 (6%)
- Not Satisfied: 10 (5%)
- Very Dissatisfied: 3 (1.5%)
- No relationship: 70 (36%)

Regarding satisfaction with family members, the response was again different, with a very high majority of participants, 161 (82%) being either satisfied or very satisfied. As many participants in both 2004 and 2005 indicated their family as a significant support, it is not surprising that so many also find great satisfaction in their familial relationships.

- Very Satisfied: 78 (40%)
- Satisfied: 83 (42%)
- Somewhat Satisfied: 25 (12%)
- Not Satisfied: 6 (3%)
- Very Dissatisfied: 3 (1.5%)
- No family relationship: 1 (.5%)

Transitions Trend #15: Participants appear to be resilient in social relationships, though this is an area of some concern. (Continuing)

In the *First Annual Report* we noted some concern that 26% of participants were dissatisfied with their friendships and relationships. This year we can say that 28% are only somewhat satisfied or are dissatisfied with friendships, though only 12.5% are somewhat satisfied or are dissatisfied with relationships (excluding those who are not currently in relationships).

VII. 4. Impact of Learning Disabilities on Employment

Areas of Strength and Difficulty

We suggested in the last report that another possible indicator of a good school-to-work transition would be the number of participants who felt their employment built on their areas of strength and interest. In 2005, 70% of participants revealed that their current employment built on their areas of strength and interest.

Transitions Trend #16: Transitions participants have chosen careers that build on their areas of strength and interest. (Continuing)

In this report, 104 of 142 currently employed participants (73%) feel their work builds on their areas of strength and interest. Seventy-two participants (50%) say they are able to avoid their greatest difficulty at work, which is similar to last year's response of 46%. One participant is struggling with this issue as he advances in his career:

> *"It is ironic that someone who can spell and who writes slowly is now a National Communications Coordinator. Writing and editing other peoples writing is more and more a big part of what I do... this focuses on my disability and is becoming harder and harder to cover up for... With my job now being National, it means that I do a lot of traveling to Toronto, Montréal, Ottawa etc... My poor working memory and ability to visualize maps and directions is a huge issue!"*

Only 32 PSE Graduate Non-Continuers who are currently employed are working in a job that allows them to avoid their area of greatest difficulty. The 39 who are unable to avoid their greatest difficulty, are often quite resilient about their problem. Many participants speak of

taking work home or asking for help of coworkers. One participant embraced the difficulty of employment: *"That's why I like it - it makes it more of a challenge!"*

One question remains with regard to those participants who are unable to avoid there greatest difficulty in the workplace. Why are so few using accommodations or assistive technology to help them in their area of greatest difficulty?

Disclosure at work

All participants, whether they are currently employed or not, were required to answer questions related to learning disability and the workplace. Those who were not currently employed were asked to answer the questions related to previous work experience.

Seventy four participants of 196 (38%) have disclosed that they have a learning disability at work, which is higher than the 2004 reported number of 30% disclosure rate. Fifty-four participants indicated 'N/A' in response to whether or not they had disclosed their learning disability at work. However, we remain curious and will investigate whether or not participants are reluctant to answer this question.

Transitions Trend #17: Transitions participants disclose their learning disability at work only when necessary for job. (Continuing)

Of those who are employed full-time and have disclosed their learning disability at work, 95% have disclosed to positive results indicating that having a learning disability may not have the stigma commonly assumed. Seventy percent of the 65 participants (46 participants) who are currently working full-time have revealed that they have a learning disability at work. Out of these 46 participants, 43 made disclosure with a positive result. This is much higher than in 2005, when 74% participants revealed to a positive result. Ninety-five percent is an incredible percentage and points to an excellent transition from school to work for these participants. One participant commented:

"Everyone is quite understanding and supportive. They're very flexible and if I have any problems or questions, I just need to communicate it to them and let them know and they'll try to help me. I try to be open about my learning disability with my co-workers and boss."

Of the two participants who revealed to a negative result, one commented on the lack of accommodations provided, though he understands why this is the case for the specific job: "*There has been no extra accommodations in the army for this as everyone must meet the same standard for training and promotions."* The other participant responded with a much more challenging story: "*I'm ignored completely, she [co-worker] doesn't care one bit. I might have to quit as I can't keep up and she barely does half the work load on a good day."*

Transitions Trend #18: Significantly more women disclose their learning disability at work than men. (Continuing)

In the *First Annual Report,* we noted that more female participants (25) working full-time had disclosed that they had a learning disability at work. In 2005, this trend remains true, with 33 women disclosing their learning disability at work, versus 13 full-time employed males.

Sixty-eight participants, (35%), have not disclosed that they have a learning disability at work. Only 19 of the 65 participants employed full-time (29%) have not disclosed that they have a learning disability at work. In 2004, the percentage of full-time employees who had not disclosed was 47%. It is important to note that most participants who have not disclosed have done so for positive reasons, most notably that disclosure is not necessary for the type of work being done. However, a few participants have not disclosed for negative reasons, such as this participant, who states: "*Due to politics in my workplace, anything may be used against employees to terminate."*

Accommodations at Work

Transitions Trend #19: Few participants who are currently employed use accommodations at work. (New Trend)

Of the 142 participants currently employed, only 18 (13%) are using accommodations at work. This is a significant decrease from the *First Annual Report* which indicated a 40% rate of accommodation use.

The most common accommodations used at work are as follows:

- Computer
- Assistive Technology
- Writing support from co-workers
- Flexible deadlines
- Work from home

Only one male PSE Graduate Non-Continuer who is employed is currently using accommodations at work, and he is the only participant who is earning over $60,000 annually. Eight female PSE Graduate Non-Continuers who are currently employed are using accommodations at work, and earn a wide range of salaries, though all above $20,000 annually. Though the number of participants using accommodations has decreased between 2004-2005, these PSE Graduate Non-Continuer statistics still seem to indicate that these particular participants have successfully made the transition from school to work using their accommodations.

Still, the majority of participants do not use accommodations in the workplace. Forty-five PSE Graduate Non-Continuers working full-time do not use accommodations in the workplace. However, only one of these participants has asked for accommodations and had that request turned down. Those who have not requested accommodations have done so for a positive reason, namely, that accommodations are not necessary for their current job. However, two participants worried about being centered out at work, and two did mention that they felt asking

for accommodations would jeopardize their jobs. One participant responded:

> *"Because showing that I need accommodations in my current job would hurt my ability to advance in my career and would decrease the respect given to me by my peers."*

Assistive Technology at Work

Only 21 (15%) currently employed participants are using assistive technology in the workplace. The most common assistive technology being used is a Palm Pilot (six), Computer (five), Spellchecker (three), Read and Write (three), Inspiration (two), Kurzweil (two), Franklin (two), word (one), DNS (one), Dragon Naturally Speaking (one). One participant mentioned that her job is training others on different kinds of assistive technology. Only two participants who are not using assistive technology requested it, and had that request denied.

As with the requests for accommodations, most participants who did not request assistive technology did not request it because it was not necessary. However, two participants did not request assistive technology for fear of being set apart from coworkers, while one feels her position could be jeopardized. One admits that there is not the budget at work for assistive technology, while two responded that they do not wish to have special treatment, and they deal with their learning disabilities in their own way.

Relationship with Co-Workers

One hundred and thirty-four of 142 currently employed participants, (94%) have a relationship with their co-workers that is described as "comfortable." One participant comments: "*I work full-time I've proven myself and they make certain accommodations for me like giving me two days off in a row, which is uncommon in retail*."

Only eight participants describe not having a good relationship with their co-workers. One participant comments: "*No, I usually do not because I am usually perceived as incompetent and*

it takes time for many people to get to know me and understand that I am a human being like them."

As for having a relationship with colleagues after work, 79 of the 142 currently employed participants responded 'yes.' Those who see their colleagues outside of work, 43 indicated they see their colleagues after work 'occasionally,' 20 'not often' and 16 indicate they see their colleagues after work 'very often.'

VIII. The Relevance of Research

Given the complexity and significant resources required to create and sustain a longitudinal study, it is important to consider its research relevance, with particular attention paid to potential future applications. Over the next decade, as the *Transitions* Trends become substantiated and thus transformed into reliable findings, we believe that the information generated from our population will be invaluable to current emerging educational themes, especially in the Province of Ontario. By following a panel of former pilot students for a full ten years, we will see discernible patterns and outcomes, which could influence both future post-secondary programming and government training programs.

The recently released Rae Review on post-secondary education confirmed a series of system-wide gaps in purpose, effectiveness, accountability, and successful student outcomes. In addition to the concerns about funding, these gaps are ascribed to the fact that 'if you don't know where you are going, any road will take you there', or, in other words, there exists a marked absence of research-based goals. It was similar concerns related to students with learning disabilities and their educational opportunities that led to the establishment of the Learning Opportunities Task Force in 1997.

The continuing feedback obtained from the former pilot students will assist the Ministry of Training Colleges and Universities to ensure that future legislation is based on a research supported set of goals for all students in Ontario attending post-secondary institutions. *Transitions* findings will complement data collected in the NSSE/CCSSE surveys so that institutions can start planning to make improvements based on evidence gleaned directly from students learning experiences. The Rae Review states that currently there are gaps in knowledge about the post-secondary system. The *Transitions* data is therefore timely, as it addresses the needs of an individual group that may otherwise be looked over by the NSSE/ CCSSE.

The Rae Review particularly highlighted the need for students with disabilities to have access to dedicated staff resources at career centres to help these students obtain employment information that is geared towards their individual needs. Just as LOTF participated in the formation of the Rae Review, the *Transitions* data as it is accumulated could aid the recently established Minister's Post-Secondary Advisory Committee on Disability Issues. The mandate of this committee is to identify the best practices at the

particular institutions for the benefit of students with disabilities, especially concerning transition into and beyond post-secondary. After taking into consideration the recommendations of the LOTF final report, this committee could also take into consideration the emerging *Transitions* data where it is institutionally specific. The 10 pilot institutions, through participating in the LOTF pilot projects, have provided very specific supports to their students, and the different career avenues explored by pilot participants may indicate to this advisory committee what supports need to be implemented in all institutions province-wide.

In particular, the unique perspective of our maturing cohort should directly assist with improving the Enhanced Services Program components, since we will be in the privileged position of seeing the efficacy of pilot program interventions from a more distant, dispassionate perspective.

The Rae Review also recommended the implementation of a new province-wide web portal as a source of current information about institutions and program availability, admissions requirements, financial aid and career opportunities. It is recommended that this portal provide specific information to students with disabilities regarding what supports are available at each institution. Since the *Transitions* Portal was a highly successful tool from both the administrative and participant side, we are hoping that it may serve as a good example of what the Provincial portal could be.

We expect that the data collected over the duration of the study will help to address some key issues facing students with learning disabilities as they navigate through their education and into the various stages of their career. To that end, we are interested in assembling information in answer to the following questions:

- how are students with learning disabilities assisted with selection of their program of study and courses leading up to and through the transition from secondary school to post-secondary education?
- as students continue their studies in college or university, what program advising are they able to access?
- do students have career guidance opportunities, and do they take advantage of these?

- does this guidance adequately service their unique needs as students with learning disabilities?
- are student with learning disabilities given opportunity to gain work experience related to their field of study?
- are students given access to programs that focus on job readiness and successful career development?
- overall, are students given adequate assistance with transition from post-secondary education to employment and career avenues?

While students with learning disabilities may be a small group within the total post-secondary educational sector, research carried out by the Learning Opportunities Task Force in Ontario and supported by much of the literature on learning disabilities, has shown that providing supports for this population also tends to enhance successful outcomes for students within the general population. For example, the concept of Universal Instructional Design was introduced in Ontario within the field of learning disabilities, but in fact benefits all learners. It is our expectation that the ongoing research work of this longitudinal study will benefit the educational system as a whole. The questions we are asking our *Transitions* panel may very well impact upon how the post-secondary sector views the transition to the employment world and subsequent stages of career development, with all of its challenges, both for students with learning disabilities and all other students.

IX. Conclusion

Moving Forward

The completion of the second year of the Ministry of Training, Colleges and Universities' ten year longitudinal Study places *Transitions* on solid ground. With 196 participants continuing into the third year, *Transitions* has established itself as a major study in the field of learning disabilities. Tracking such a large and specific population from the completion of their education and into career and social experiences is unprecedented in Canada.

Maintaining the high participant numbers will require a great deal of effort to engage this fascinating and evolving population. Study participants will be contacted several times throughout the year, and will be invited to comment with their individual take on the *Transitions Trends*. We want to engage participants so that they will stay with the study, but most of all, we hope that people will continue to participate because they feel that the emerging *Transitions* picture is relevant to their lives. It is hoped that at the end of the ten year study, people will be able to reflect back and say that participating in *Transitions* was one of many ways in which they have contributed to making a difference.

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XI. Appendix 1: Salaries of University Graduates by Graduation Date

2004 primary graduates:	3 earning $15,000—20,000
	1 earning $30,000—35,000
	1 earning over $60,000
2003 primary graduates:	1 earning $25,000—30,000
2003 secondary graduates:	1 earning $15,000—20,000
2002 secondary graduates:	2 earning $25,000—30,000
	1 earning $40,000—45,000
	1 earning $45,000—50,000

XI. Appendix 2: Type of Employment of University Graduates by Graduation Date

2004 primary graduates:	1 earning $30-35 (communications)
	3 earning $15-20 (1 childcare/recreation, 2 retail)
	1 earning over $60 (environmental biologist)
2003 primary graduates:	1 earning $25-30 (librarian)
2003 secondary graduates:	1 earning $15-20 (education)
2002 secondary graduates:	2 earning $25-30 (1 office/admin, 1 retail)
	1 earning $40-45 (office/admin)
	1 earning $45-50 (childcare/recreation)

XI. Appendix 3: College graduates salary by graduation year

Diplomas:

2004 primary graduates:	1 earning $15-20, 1 earning $20-25, 2 earning $25-30
2004 secondary graduates:	1 earning $20-25, 1 earning 35-40, 1 earning 40-45
2003 primary graduates:	1 earning 15-20, 1 earning 25-30, 1 earning 35-40, 1 earning 40-45, 1 earning 50-60
2003 secondary graduates:	1 earning 15-20, 1 earning 35-40, 1 earning 40-45
2002 primary graduates:	1 earning under 5000, 2 earning 10-15, 1 earning 15-20, 1 earning 20-25, 3 earning 30-35, 1 earning 35-40, 1 earning 45-50
2002 secondary graduates:	1 earning 15-20, 1 earning 20-25
2001 primary gradates:	1 earning 15-20, 1 earning 20-25, 1 earning 30-35, 1 earning 35-40, 1 earning 40-45, 1 earning 45-50
2000 primary graduates:	1 earning 15-20, 1 earning 25-30, 2 earning 30-35
1999 primary graduates:	1 earning 15-20, 1 earning 35-40

Certificates:

2004 primary graduates:	1 earning $30-35
2003 primary graduates:	1 earning $25-30

XI. Appendix 4: Type of Employment of College Graduates by Graduation Date

Diplomas:

2004 primary graduates:	1 earning $15-20 (retail)
	1 earning $20-25 (retail)
	2 earning $25-30 (1 computers, 1 construction/factory/trade)
2004 secondary graduates:	1 earning $20-25 (construction/factory/trade)
	1 earning 35-40 (other: aerospace telecommunications)
	1 earning 40-45 (automotive)
2003 primary graduates:	1 earning 15-20 (security/corrections)
	1 earning 25-30 (construction/factory/trade)
	1 earning 35-40 (retail)
	1 earning 40-45 (other: youth councellor)
	1 earning 50-60 (health care: respiratory specialist)
2003 secondary graduates:	1 earning 15-20 (office/administration)
	1 earning 35-40 (computers)
	1 earning 40-45 (construction/factory/trade)
2002 primary graduates:	1 earning under 5000 (restaurant/hospitality)
	2 earning 10-15 (1 childcare/recreation, 1 restaurant/hospitality)
	1 earning 15-20 (other: photographer)
	1 earning 20-25 (communications)
	3 earning 30-35 (1 office/administration, 1 security/corrections, 1

	restaurant/hospitality)
	1 earning 35-40 (other: youth counselor)
	1 earning 45-50 (health/fitness)
2002 secondary graduates:	1 earning 15-20 (other: merchandiser)
	1 earning 20-25 (childcare/recreation)
2001 primary gradates:	1 earning 15-20 (childcare/recreation)
	1 earning 20-25 (education)
	1 earning 30-35 (construction/factory/trade)
	1 earning 35-40 (other: job coach)
	1 earning 40-45 (automotive)
	1 earning 45-50 (office/administration)
2000 primary graduates:	1 earning 15-20 (childcare/recreation)
	1 earning 25-30 (childcare/recreation)
	2 earning 30-35 (1 childcare/recreation, 1 security/corrections)
1999 primary graduates:	1 earning 15-20 (other: field technician)
	1 earning 35-40 (construction/factory/trade)

Certificates:

2004 primary graduates:	1 earning $30-35 (healthcare)
2003 primary graduates:	1 earning $25-30 (other: operations supervisor)

XI. Appendix 5: Validation Status, Documentation and Definition of a Learning Disability

There were **1242** students deemed eligible, and served by the pilot programs between 1998 and 2002. It is from this pool of persons with learning disabilities that the *Transitions* cohort was created. We contacted as many former pilot students as we could find and asked if they would agree to participate in the longitudinal study. All former LOTF pilot students are welcome to become involved in *Transitions* at any time in the study.

However, it is important to remember that this cohort has been carefully selected in the sense that all participants have previously undergone a rigorous process to determine the validity of their learning disability. In examining the literature on learning disabilities, this issue is often not dealt with. Studies generally report on populations of persons or, more likely, students with learning disabilities without referencing how it was determined that they have a learning disability. This is a critical piece for researchers to consider in the field of learning disabilities.

Relying on secondary-school assessments, IPRC identification, I.E.P.s, etc. will not provide dependable information on the validity of claim to learning disability. Incredibly, during the pilot years, between 70% to 100% of the newly enrolled pilot students had inadequate or no documentation of their learning disabilities. For this reason, LOTF imposed a stringent documentation criterion for pilot projects before they could claim a student eligible for entry into the program. (See LOTF Diagnostic and Documentation Criteria for Pilot Project Eligibility for Students with Specific Learning Disabilities, LOTF, January, 2000). There is no precedent in the field and practice of providing service to students with learning disabilities for such a documentation requirement to be fulfilled before a student becomes eligible for inclusion into a program.

The following is a breakdown of the culminate data showing how the number 1242 was arrived at in determining a validated population of students with learning disabilities:

- Students deemed eligible through the validation process: 987

- Students who met the first year participation criteria and were exempted from the formalised validation process, usually because they did not continue beyond the first year: 138
- Students exempted from the validation, since they were only involved in the summer projects:117
- Students who were deemed ineligible through the Validation process, i.e. excluded from the database: 302

The Enhanced Services Fund has maintained LOTF's commitment to serving a validated population of students with learning disabilities. All colleges and universities in Ontario are eligible to receive funding to create two specialised positions to assist students with learning disabilities, those of Learning Strategist and Assistive Technologist, based on the recommendations within LOTF's Final Report. Currently, all 45 post-secondary institutions have these positions, or a combination of these positions in place. This support structure is unique in the world.

In order to qualify for funding, post-secondary institutions must currently adhere to the Learning Disabilities Association of Ontario's definition of a learning disability. Psychoeducational assessments use the following LDAO definition in its diagnosis of learning disability:

LDAO Definition of Learning Disabilities

"Learning Disabilities" refers to a variety of disorders that affect the acquisition, retention, understanding and organization or use of verbal and/or non-verbal information. These disorders result from impairments in one or more psychological processes related to learning in combination with otherwise average abilities essential for thinking and reasoning. Learning disabilities are specific, not global, impairments and as such are distinct from intellectual disabilities.

Learning disabilities range in severity and invariably interfere with the acquisition and use of one or more of the following important skills:

- oral language (e.g., listening, speaking, understanding)

- reading (e.g., decoding, comprehension)
- written language (e.g., spelling, written expression)
- mathematics (e.g., computation, problem solving)

Learning disabilities may also cause difficulties with organisational skills, social perception and social interaction.

The impairments are generally life-long. However, their effects may be expressed differently over time, depending on the match between the demands of the environment and the individual's characteristics. Some impairments may be noted during the pre-school years, while others may not become evident until much later. During the school years, learning disabilities are suggested by unexpectedly low academic achievement or achievement that is sustainable only by extremely high levels of effort and support.

Learning disabilities are due to genetic, other congenital and/or acquired neuro-biological factors. They are not caused by factors such as cultural or language differences, inadequate or inappropriate instruction, socio-economic status or lack of motivation, although any one of these and other factors may compound the impact of learning disabilities. Frequently, learning disabilities co-exist with other conditions, including attentional, behavioural and emotional disorders, sensory impairments or other medical conditions.

For success, persons with learning disabilities require specialised interventions at home, school, community and workplace settings, appropriate to their individual strengths and needs, including:

- specific skill instruction;
- the development of compensatory strategies;
- the development of self-advocacy skills;
- appropriate accommodations.