



Canadian Society for Medical Laboratory Science
Société canadienne de science de laboratoire médical

Newly Certified Graduate Employment Survey

2015 Graduates

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Table of Contents

Executive Summary	2
Survey Purpose:	3
Survey Design Summary:	3
Survey Dissemination:	3
Participant Demographics:	4
Academic Demographics:	4
Current Employment Status:	5
Current Certification Level Positions:	5
Graph 1: Certification Level Positions	5
Graph 2: MLT Job Attractiveness	7
Graph 3: MLA Job Attractiveness	8
Employment Status 1 Year Post-Certification:	8
Graph 4: MLT One Year Post Certification Employment	9
Graph 5: MLA One Year Post Certification Employment	10
Graph 6: MLA Laboratory Discipline and Section	11
Graph 7: MLT Laboratory Discipline and Section	11
Overall Satisfaction:	12
Table 8: Percent Positive Satisfaction Questions	12
Table 9: 2015 - Percent Positive Overall Satisfaction Calculation	13
Table 10: 2014 - Percent Positive Overall Satisfaction Calculation	13
Conclusion	13
Appendix A: Location of Schooling for MLA and MLT Education	14
Appendix B: Reasons for Looking for a New Position	15
Appendix C: Change over time in Satisfaction Scores by Professional Group	17

Executive Summary

Survey Purpose: This survey examines the employment rate of medical laboratory professionals who were successful in passing the Canadian Society for Medical Laboratory Science (CSMLS) certification exam within a specified year. The employment information is focused on the graduate's experience one year after certification and the pathway taken to achieve this, including barriers and facilitators. It provides an indication of labour market needs for professionals and employers as well as vital information for academic programs and students evaluating entrance into the profession.

Participants: This report analysis includes Medical Laboratory Assistants/Technicians (MLA) and Medical Laboratory Technologists (MLT; general, clinical genetics and cytotechnologists) who passed their CSMLS certification exam in 2015 (Feb., June and Oct). Employment rates are recorded for one year after this period in 2016. A total of 203 graduates completed the 2015 survey, resulting in an 18% (203/1159) participation rate. Seventeen surveys were excluded resulting an N value of 186 for analysis (MLA = 42%, 78/186; MLT =58%, 108/186).

Methodology: The survey was administered via SurveyMonkey over a three-week period in March 2017.

Results:

Overall, 55% of MLTs had were employed at their certification level three months after passing the exam and 71% by six months. The MLT majority indicated that their position (or one of their positions) was located in the hospital environment or private laboratory/clinic. For MLAs, overall, 42% were employed at their certification level by three months post-exam and 59% by six months, which is less at both time points than MLTs.

The vast majority of graduates are looking to obtain permanent full-time positions within a year after certification. MLT participants were able to achieve this 47% of the time, which is less than the 63% in 2014. MLAs were significantly prone, more than MLTs, to be working in a non-permanent position and have a part-time or casual employment status. MLTs were mainly attracted to their current jobs because of location, full-time status and the type of work performed. MLAs focused on location, chance to gain or develop skills and salary as top attractions.

In general, job satisfaction questions show that MLTs are more likely to be satisfied than their MLA counterparts. Nonetheless, when the professional subgroups were combined, there is a high level of overall satisfaction. MLAs indicated a greater increase in positive satisfaction scores between 2014 and 2015 data, compared to MLTs.

Conclusion: Overall, MLAs and MLTs continue to obtain employment post-graduation in a timely fashion. Although the initial position(s) may not be permanent full time, both groups are generally accepting of the current marketplace and overall, indicate a relatively high satisfaction level for their profession.

Newly Certified Graduate Employment Survey: 2015

Survey Purpose:

This survey examines the employment rate of Medical Laboratory Assistants/Technicians (MLA) and Medical Laboratory Technologists (MLT; general, clinical genetics and cytotechnologists) who passed the Canadian Society for Medical Laboratory Science certification exam within a specified year. The employment information is focused on the graduate's experience one year after certification and the pathway taken to achieve this, including barriers and facilitators. It provides an indication of the labour market need for professionals and employers as well as vital information for academic programs and students evaluating entrance into the profession.

Survey Design Summary:

Please note that the 'New Graduate Survey' has been renamed to the 'Newly Certified Graduate Employment Survey' to better reflect the participant population and intent of the data gathering effort.

The 'New Graduate Survey' was redesigned in 2014 for the 2015 calendar year and incorporated additional skip logic and refinement of questions compared to the previous processes. Thus, comparisons of the 2015 data to years prior to 2014 may not be appropriate on specific items.¹ For 2016 data and forward, a progression of these changes was continued as the methodology to disseminate the annual survey was reviewed by CSMLS and deemed necessary for enhanced statistical trending. A project management Smartsheet (online spreadsheet) was created internally to monitor dissemination, and policy document and process algorithm maintenance.

Survey questions have not been made mandatory and thus, some n values differ between questions; however, the majority of participants responded consistently across time indicating that this is an acceptable methodology for the population.

This report provides analysis for medical laboratory professionals (MLP; includes MLAs MLTs) response comparison as n values for each group were large enough.

An additional note of importance is that the CSMLS certification exam was reviewed and updated in 2015. This may or may not have an impact on the employment survey results in comparison to previous years.

Survey Dissemination:

The survey was administered via SurveyMonkey over a three-week period in March 2017 and was sent to all CSMLS 2015 certification exam participants who successfully passed (Feb., Jun., and Oct. 2015 exams; all MLT and MLA exams).

A protocol was enacted to disseminate the survey through targeted emails using an extraction of potential participants from iMIS (criteria can be found in procedure documents).

¹ Note that direct comparison to the survey disseminated in 2014 should not occur as some survey skip logic was missing and resulting interpretations were not as rigorous as the current year.

Participant Demographics:

A total of 203 graduates completed the certification exam in 2015 (as will be reference to as the '2015 survey' going forward), resulting in an 18% (203/1159) participation rate, which is slightly higher than the 15% response rate in 2014 data (as will be reference to as the '2014 survey' going forward). Of the completed surveys in 2015, 17 were excluded from the calculation (n=4 indicated that they graduated in a year other than 2015, n=13 surveys were considered incomplete). An additional investigation of the IP addresses and survey answers for duplication was conducted and did not identify any concerns.

Of the remaining 186 participants, 88% (164/186) were Canadian trained and only 12% (22/186) were internationally trained. Almost half of the individuals completed their CSMLS 2015 certification exam in June (46%, 86/186), with the other graduates equally completing the exam in February (27%, 50/186) and October (27%, 50/186). A good portion of graduates were CSMLS members at the time of their survey: 78% (83/107) of MLTs and 58% (45/77) of MLAs. The 2015 results include more internationally trained individuals and a lesser number of self-identifying as a CSMLS members than in the previous year.

The MLT participation (58%, 108/186) was divided into General Medical Laboratory Technologists (90%, 97/108), Diagnostic Cytotechnologists (3%, 3/108) and Clinical Genetics Technologists (7%, 8/108). As the participation rate highly favoured the general category as in other years and standard with non-targeted CSMLS survey results, further analysis of the subgroups was not possible. MLAs represented 42% (78/186) of all participants, which is a higher proportion of participants compared to the previous year.

Academic Demographics:

MLT and MLA participants were from a variety of schools across Canada, with greater diversity of academic institutions and provinces for MLTs than MLAs (see Appendix A).

Combining national and international training programs, the highest education level completed most often by MLTs was a bachelor's degree (46%, 49/107) followed by high school (25%, 27/107), with achievements between a high school diploma and a bachelor degree² equaling 18% (19/107). Eleven percent of graduates (12/107) indicated academic advances beyond the bachelor's degree. For those that had completed some education but may not have finished it, 17% (18/107) were self-identified and had mainly completed some university courses in a science related field.

Although MLT results were similar to the previous year, MLA results slightly differed. In 2014 data, the highest and most prominent MLA education metric was a high school diploma at 40% (27/67) of graduates. In the 2015 data, the bachelor's degree was the most prominent at 41% (27/66) followed by a community college or CEGEP certificate or diploma (15%, 10/66). Twenty-one percent of graduates (14/66) indicated academic advances beyond the bachelor's degree. Less than MLTs, only 10% (8/77) of MLAs indicated some education courses completed that had not been finalized by a degree or certificate, of which much was associated with university or college science-based courses.

² Includes responses associated with the following options: Trade or vocational diploma or certificate, Community college or CEGEP certificate or diploma, technical institute diploma or certificate, and university diploma or certificate below bachelor's degree.

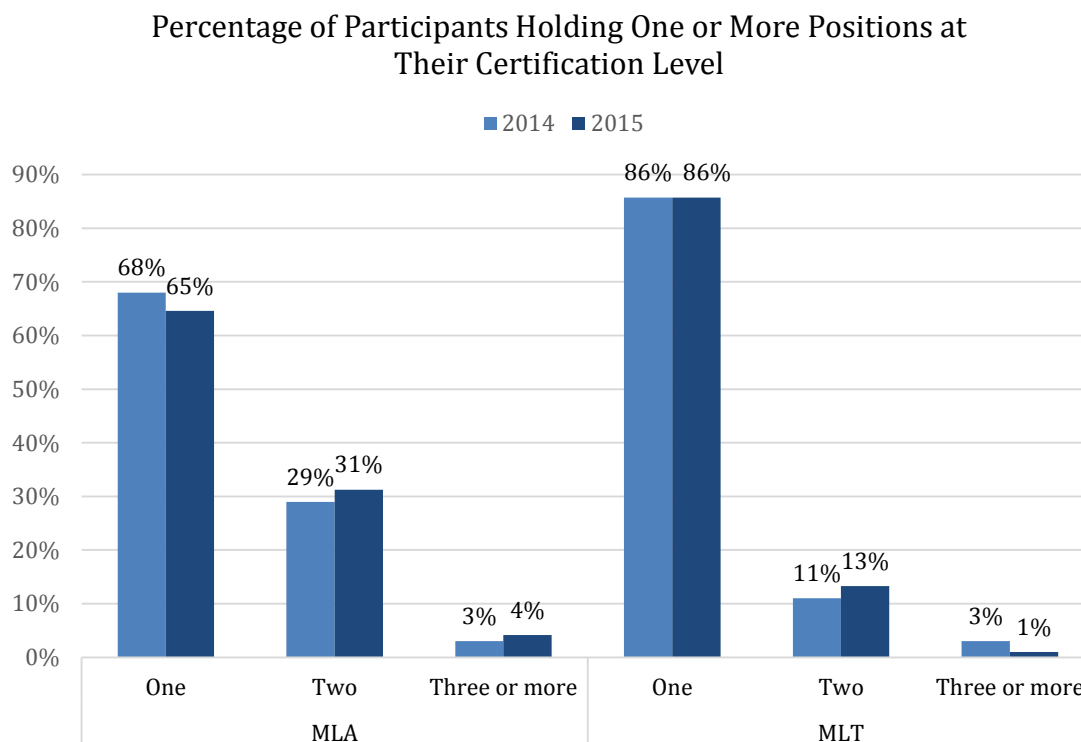
Current Employment Status:³

Ninety-seven percent (104/107) of MLTs indicated that they were employed at the time of the survey compared to 75% (58/77) of MLAs. Of these graduates, 94% (98/104; consistent with 2014 data) of the employed MLTs stated they were working in a job at their certification level whereas only 83% (48/58; higher than 2014 data – 69%) employed MLAs stated the same. Of the six MLT participants who were not working at this level and cited a reason for it, the following responses were obtained: can't find a job (n=3) and 'other' (n=3). Only three out of the six individuals were actively looking for work and only two stated that they would not be willing to move to find a job (e.g., cost of living, personal or family related reasons). Nine (90%, 9/10) MLA graduates who were not working at this level said that they couldn't find a job or none were available, while one individual cited 'other' as the reason. Of these MLAs, eight would be willing to move to find employment.

Current Certification Level Positions:

MLAs and MLTs working at their certification level may or may not hold one or more positions. For MLTs, job stability within a single position was much more likely compared to the experience of MLAs. Only 14% (14/98) of MLTs had two or more jobs compared to the 35% (17/48) of MLAs. This difference speaks to the current labour market requirements of employers. The graph below demonstrates the stability of these findings between two years.

Graph 1: Certification Level Positions



³ Current employment status indicates if they were employed at the time they completed the survey. As certification exams can occur at three different time points within a year, additional questions were asked later in the survey for the participant to discuss their employment situation *one* year post certification.

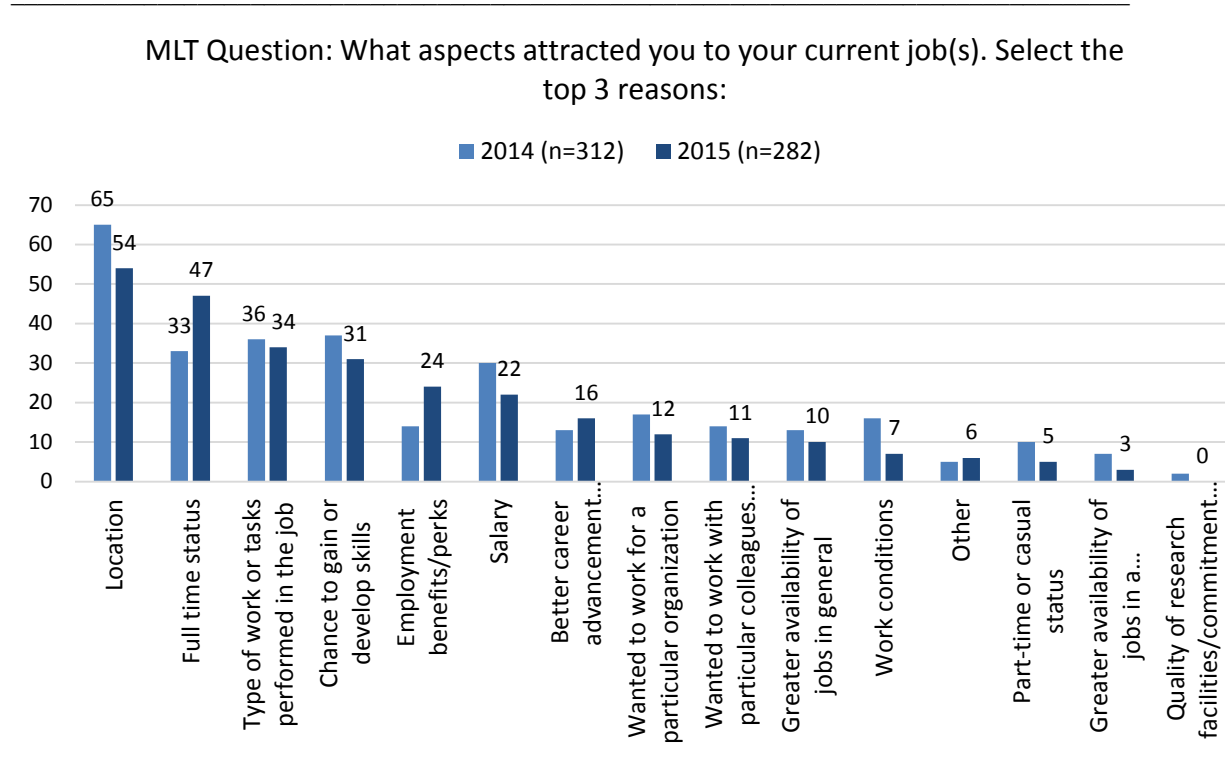
New MLT graduates typically found their position(s) by answering a job ad on the internet (42%, 40/96), contacting an employer directly (18%, 17/96), or are approached/contacted directly by employer (17%, 16/96), representing 76% (73/96) of the methods used to find a position. In the 2015 data, 40% (38/96) of new MLT graduates found a position at their academic clinical placement location compared to 51% in the 2014 data (54/105).

Many comments in the survey associated with moving from school or clinical placement site focused on the lack of job postings at the clinical placement and a defined need to move to another location for a position. Other responses for not being hired in the clinical placement site included obtaining a job in a different department at the same hospital and preferential choice not to apply. When the 2015 participants were directly asked, those who were not employed at their clinical placement indicated that 22% (13/58) moved to another province, 31% (18/58) moved to another part of the same province and 12% (7/58) moved to another country to gain employment. The remaining 34% (20/58) said that they did not move. Patterns associated with moves showed no consistency other than the majority (20/34) were relocations to a different province rather than within the same province (for those who answered the question).

Overall, these results indicate that employment is available to MLTs near or at their clinical placement sites as well as opportunities arising in other locations across Canada, albeit not in flourishing numbers. There were no themes associated with precarious employment within the comments, a divergence from the previous year.

As in the previous year, location was the number one reason MLT participants choose their position. In 2014 data, there was a drastic drop in the subsequent second and third most often chosen reasons, which included a change to gain or develop skills, and desire for the type of work or tasks performed on the job. Interestingly, this was then followed by full-time employment status and salary potential suggesting (and reflective of the data discussed thus far) that obtaining employment is not a fear of graduates and therefore, more abstract concepts of picking a position can be valued higher. Results for 2015 data showed a different pattern. For that group, obtaining a full-time job status was much more important this year (increased from 11% to 17%) and might be a reflection of the health human resource shortages.

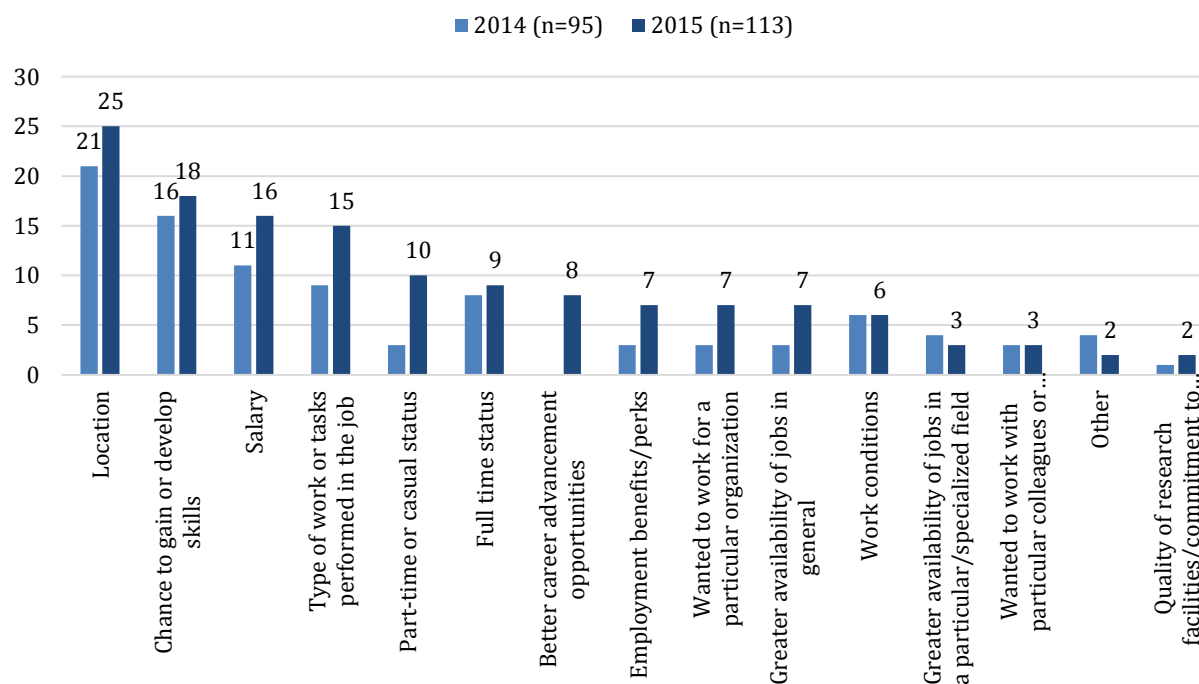
Graph 2: MLT Job Attractiveness



MLA graduates used similar job obtainment methods as the MLTs to find employment: answered job ad on the internet (52%, 25/48) or they approached/contacted an employer directly (21%, 10/48). This represents 73% (35/48) of the methods used to find a position. The remaining attempts were varied and had four or fewer responses. Also, similar to MLTs, only 38% (18/48) of MLAs were working where they completed their clinical training. Reasons for not working in the same place slightly varied with a focus on job opportunities as the reason for moving and did not indicate job shortages as an issue.

Graph 3: MLA Job Attractiveness

MLA Question: What aspects attracted you to your current job(s). Select the top 3 reasons:



**Note n values differed significantly between years for MLA on this particular question.*

A sub-group of the certified respondents answered questions in respect to their job seeking habits and rationale for it while employed (see Appendix B for graphs). Twenty-one percent (20/94) of MLTs were looking for a new position, consistent with the previous year. This group discussed wanting to increase their hours, move closer to home, or wanting more challenging responsibilities as their most predominant reasons. For MLTs, higher order needs dominated the top three choices with wanting better pay and more hours followed by a more intrinsic need for greater challenges or responsibility. MLAs were asked the same questions with slightly different results. Thirty-seven percent of the respondents (17/46) stated that they were looking for a new job, although currently employed. Top choices for reasons to search for alternative work matched MLT patterns exactly.

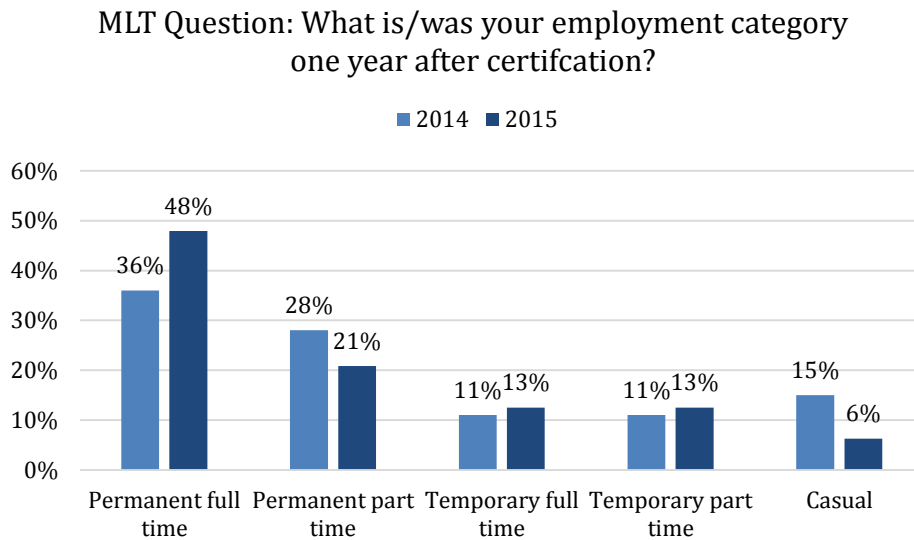
Employment Status 1 Year Post-Certification:

Depending on when the participant was surveyed, employment status at the time of the survey versus one year after their certification exam can be different between individuals (see the previous footnote on Current Employment). In order to determine if there was a difference between the 'current' status and that of the 'one year' status, additional questions were asked. This issue has been rectified in the 2016 data and thereafter.

For MLTs, 94 individuals (100% who answered the question) stated that they were employed as an MLT one year after certification, one had a position (full or part-time) at an MLA level, one was attending further education and three were in positions classified as neither MLA or MLT.

The vast majority of graduates are looking to obtain full time permanent positions after certification within their year. MLT participants were able to achieve this 48% (46/96) of the time, which is less than the 63% (66/104) in 2014. A temporary full-time position was captured by 13% (12/96) of MLTs, with part-time positions in permanent and temporary status achieved 21% (20/96) and 13% (12/96) for the remainder respectively. A casual position was held by 6% (6/96) of respondents.

Graph 4: MLT One Year Post Certification Employment



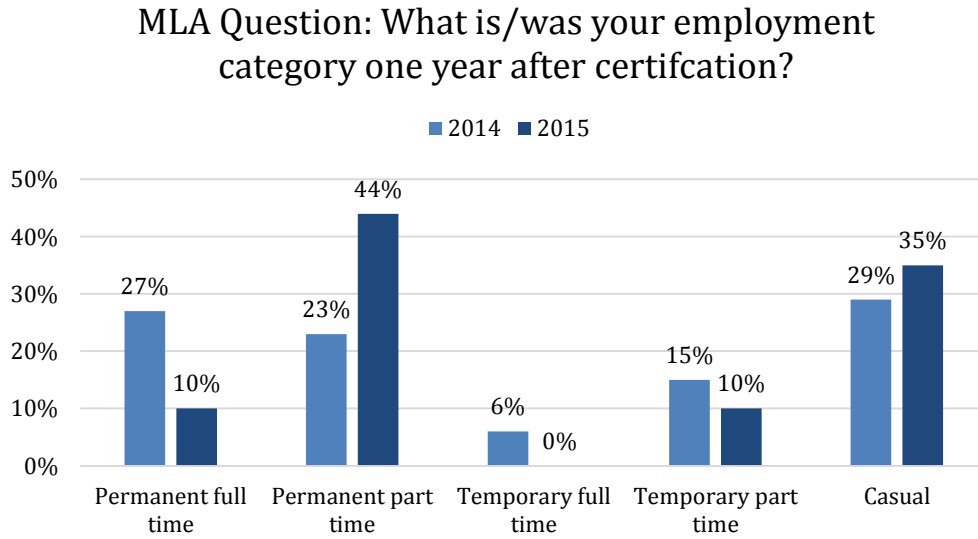
Overall, 55% (77/139) of MLTs had a position at their certification level after three months and 71% (98/139) by six months. For those that found temporary employment, the majority (69%, 40/58) obtained this within three months and this increased to 88% (51/58) by six months. For permanent positions, only 46% (37/81) of graduates obtained this by three months and 58% (47/81) by six months.

The MLT majority indicated that their position (or one of their positions) was located in a hospital environment (n=81) or private laboratory or clinic (n=14). The remaining chosen options had three or less responses each and included public health, governmental or research laboratory.

The MLT landscape one year after certification is different than the MLT one. For MLAs, 41 were employed in an MLT position, two in MLT positions, seven in positions that were not considered MLT or MLT, and four were continuing their education at the time of the survey. MLAs work in different settings with the number one location indicated as a hospital (n=25) followed by a private clinic/laboratory (n=20). The main difference for MLT was found within their employment category and time incurred to obtain employment.

MLAs were significantly prone more than MLTs to be working in a non-permanent position and in part-time or casual employment status. Graph 5 demonstrates the dramatic shift in employment category for MLAs between 2014 and 2015.

Graph 5: MLA One Year Post Certification Employment

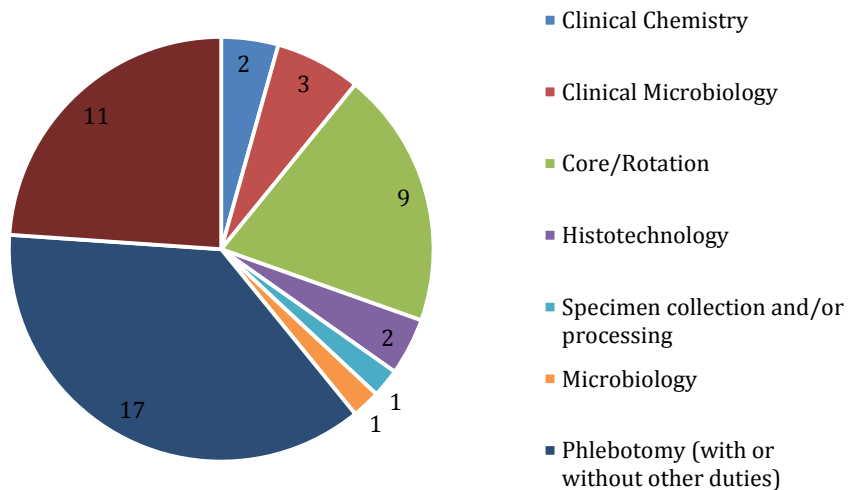


For MLAs, overall, 42% (32/76) were employed at their certification level by three months and 59% (45/76) by six months, which is less at both time points than MLTs. For those who found temporary employment, approximately half (49%, 20/41) obtained this within three months and this increased to 71% (29/41) by six months. In regards to permanent positions, fewer graduates had obtained this status by three months (34%, 12/35) as well as by the six-month marker (46%, 16/35).

When asked what discipline or section of the lab one was working in, MLA indicated that they were in a Phlebotomist role (with or without other assigned duties; 37%, 17/46), while MLTs were focused in Core/Rotation roles (34%, 32/95). Graphs 6 and 7 provide further detail.

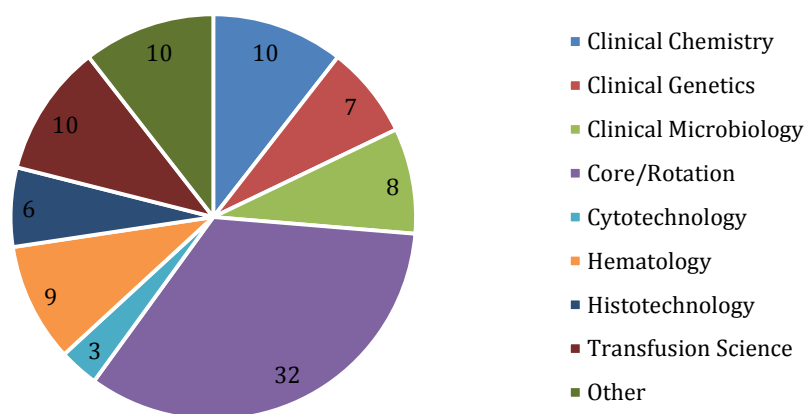
Graph 6: MLA Laboratory Discipline and Section

MLA Question: Discipline/Section of Laboratory are You Working in?



Graph 7: MLT Laboratory Discipline and Section

MLT Question: Discipline/Section of Laboratory are You Working in?



Overall Satisfaction:

Employment and job satisfaction was gathered using various questions at the end of the survey and was completed by only those who were employed in a position at their certification level. Each of the questions in the table below provides a percent positive score representing those who stated 'somewhat to strongly agree' per question. Further extraction of the data details (total numbers, averages, modes etc.) can be obtained from the analysis file upon request.

In general, satisfaction questions (as highlighted in green below) show that MLTs, per question, are more likely to be satisfied than their MLA counterparts. When the professional subgroups are combined, we see a high level of overall satisfaction (non-weighted calculation). For details of satisfaction questions and comparisons between 2014 and 2015 data can be found in Appendix C.

Table 8: Percent Positive Satisfaction Questions

Percent Positive Score	MLA	MLT	All Participants
The job meets my expectations.	87%	93%	91%
My employer's expectations of me are at the right level.	83%	91%	88%
Guidance is available when I need it.	85%	88%	87%
I did not feel any pressure to accept a job in my training site.	89%	72%	78%
I have the job I wanted.	80%	88%	86%
I work in the discipline I wanted.	87%	87%	87%
I prefer to work part-time.	39%	15%	23%
Shift work was not a factor in my choosing my job.	48%	52%	51%
I live in the city/town I wanted.	80%	74%	76%
I would move to another province for a job.	26%	34%	31%
I would move to a rural community for a job.	22%	36%	31%
I would move to another country for another job.	17%	18%	18%
Considering my experience, education and training, I am satisfied with my job.	76%	89%	85%
I believe a degree is required for career promotion.	50%	55%	54%
If given the chance, I would choose this career again.	67%	85%	79%

MLTs and MLAs are generally satisfied with their employment as indicated when satisfaction questions were combined to provide an 'overall' score. For the questions highlighted in green above, the results were combined to produce the below table. For MLTs, 87% were satisfied with their current certification level position and 81% of MLA were as well. MLAs showed the greatest increase in positive score year over year as shown in the tables on the next page.

Table 9: 2015 - Percent Positive Overall Satisfaction Calculation

2015 Results Overall Satisfaction	MLA		MLT		All Participants	
Strongly Agree	160	43%	407	55%	567	51%
Somewhat Agree	137	37%	233	32%	370	34%
Neutral	47	13%	52	7%	99	9%
Somewhat Disagree	20	5%	34	5%	54	5%
Strongly Disagree	4	1%	10	1%	14	1%
% POSITIVE SCORE	368	81%	736	87%	1104	85%

Table 10: 2014 - Percent Positive Overall Satisfaction Calculation

2014 Results Overall Satisfaction	MLA		MLT		All Participants	
Strongly Agree	109	41%	406	51%	515	48%
Somewhat Agree	87	33%	272	34%	359	34%
Neutral	51	19%	68	9%	119	11%
Somewhat Disagree	15	6%	42	5%	57	5%
Strongly Disagree	2	1%	12	2%	14	1%
% POSITIVE SCORE	196	74%	678	85%	874	82%

Conclusion

Overall, MLAs and MLTs continue to obtain employment post-graduation in a timely fashion. Although the initial position(s) may not be permanent full time, both groups are generally accepting of the current marketplace and indicate an overall relatively high satisfaction level for their profession.

Appendix A: Location of Schooling for MLA and MLT Education

Location	MLA	MLT	Grand Total
AB	17	12	29
BC	1	21	22
MB	10	3	13
NB	3	11	14
NL	1	3	4
ON	34	42	76
SK	0	3	3
QC	0	3	3
NS	0	3	3
Other	12	7	19
Grand Total	78	108	186

Appendix B: Reasons for Looking for a New Position

Table 11: Job Seeking Reason - MLT

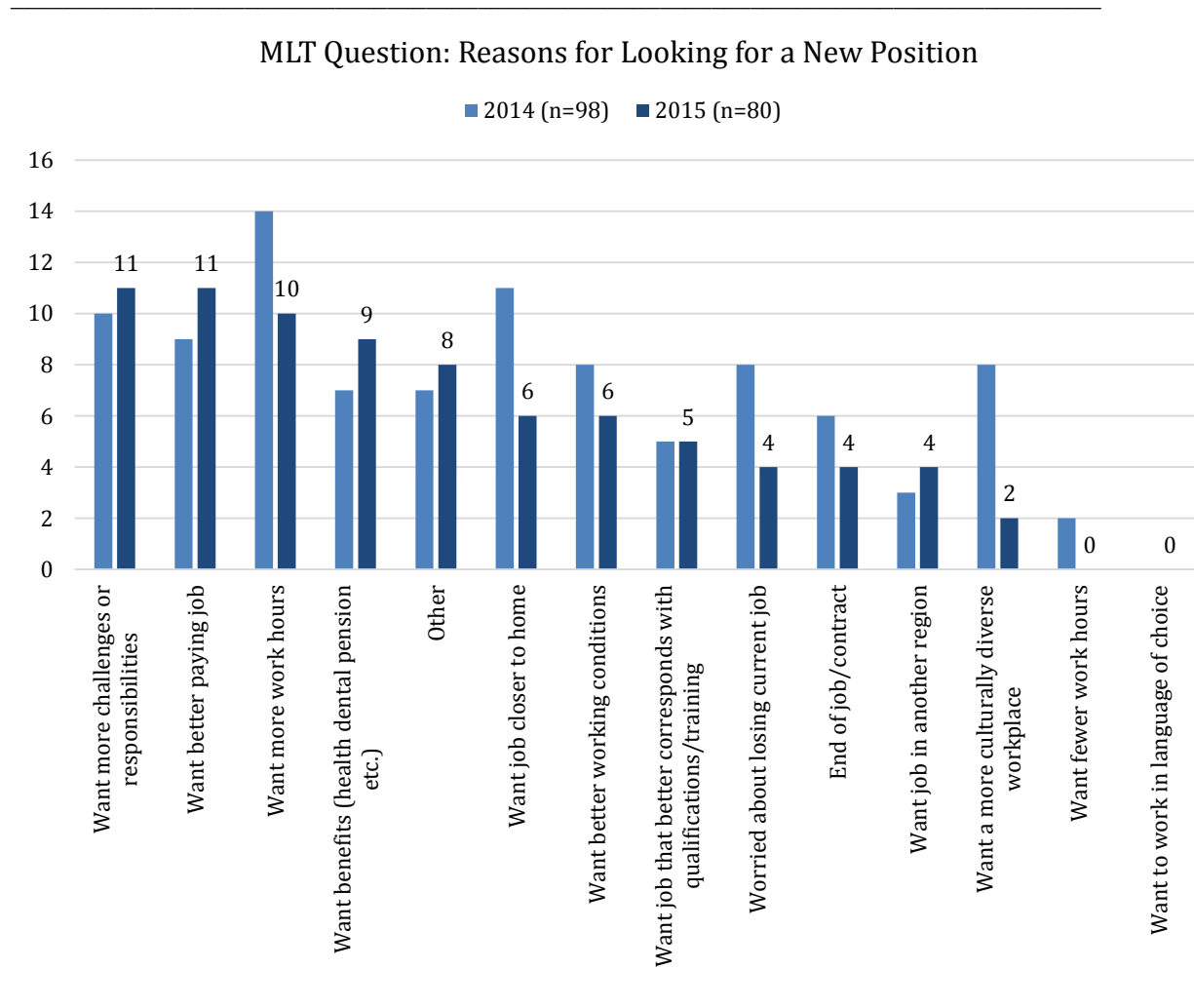
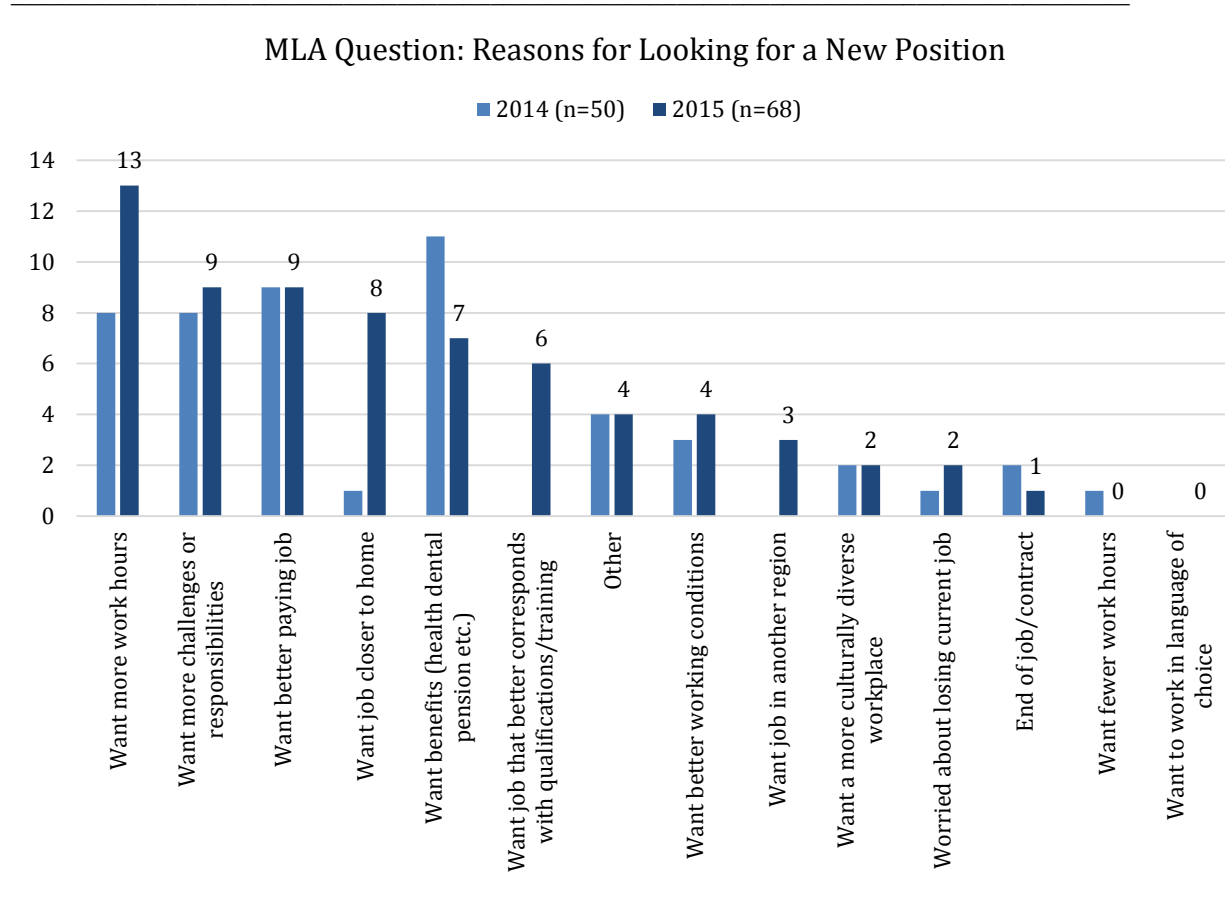


Table 12: Job Seeking Reason - MLA



Appendix C: Change over time in Satisfaction Scores by Professional Group

Legend	
Green	Increase by 3% or more
Yellow	Within + or - 2%
Red	Decrease by 3% or more

*Negative or positive context is not implied by colour legend. Individual interpretation of question is required.

MLA Percent Positive Score	2014	2015
The job meets my expectations.	82%	87%
My employer's expectations of me are at the right level.	88%	83%
Guidance is available when I need it.	76%	85%
I did not feel any pressure to accept a job in my training site.	82%	89%
I have the job I wanted	67%	80%
I work in the discipline I wanted.	67%	87%
I prefer to work part-time.	12%	39%
Shift work was not a factor in my choosing my job.	58%	48%
I live in the city/town I wanted.	85%	80%
I would move to another province for a job.	30%	26%
I would move to a rural community for a job.	24%	22%
I would move to another country for another job.	9%	17%
Considering my experience, education and training, I am satisfied with my job.	67%	76%
I believe a degree is required for career promotion.	55%	50%
If given the chance, I would choose this career again.	64%	67%

MLT - Percent Positive Score	2014	2015
The job meets my expectations.	94%	93%
My employer's expectations of me are at the right level.	94%	91%
Guidance is available when I need it.	86%	88%
I did not feel any pressure to accept a job in my training site.	70%	72%
I have the job I wanted	81%	88%
I work in the discipline I wanted.	83%	87%
I prefer to work part-time.	22%	15%
Shift work was not a factor in my choosing my job.	55%	52%
I live in the city/town I wanted.	69%	74%
I would move to another province for a job.	41%	34%
I would move to a rural community for a job.	36%	36%
I would move to another country for another job.	31%	18%
Considering my experience, education and training, I am satisfied with my job.	86%	89%
I believe a degree is required for career promotion.	60%	55%
If given the chance, I would choose this career again.	85%	88%

MLA/MLT - Percent Positive Score (All participants)	2014	2015
The job meets my expectations.	91%	91%
My employer's expectations of me are at the right level.	92%	88%
Guidance is available when I need it.	83%	87%
I did not feel any pressure to accept a job in my training site.	73%	78%
I have the job I wanted	77%	86%
I work in the discipline I wanted.	79%	87%
I prefer to work part-time.	20%	23%
Shift work was not a factor in my choosing my job.	56%	51%
I live in the city/town I wanted.	73%	76%
I would move to another province for a job.	38%	31%
I would move to a rural community for a job.	33%	31%
I would move to another country for another job.	26%	18%
Considering my experience, education and training, I am satisfied with my job.	81%	85%
I believe a degree is required for career promotion.	59%	54%
If given the chance, I would choose this career again.	80%	79%