Prepared for:

Learning Outside Together

Impact Report

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Learning Outside Together

BC Aboriginal Child Care Society

ECEBC | early childhood educators of BC

SRDC SINCE 1991 DEPUIS SRSA
INNOVATION • EXPERIMENTATION • EVALUATION

ACKNOWLEDGEMENTS AND GRATITUDE

We are deeply grateful to the many individuals who dedicated time and energy to this project. This work would not have been possible without contributions from participants, partners, content creators, and members of the LOT Steering Committee. We are honoured to reflect on our work together through this report.

Throughout this project and our interactions with one another, we were often gifted with the invitation to approach our work with good hearts and minds. This powerful gesture guided us well and allowed us to make meaningful progress together. It is a practice that has enriched our work and extends beyond the LOT project.

In the spirit of learning together, we invite the reader to approach this report with curiosity and a sense of presence in the current moment. Our hope is that you can find inspiration and wisdom to further the important work being done to embrace time outdoors and think deeply about our collective relationships with the land and one another.

Finally, we would like to acknowledge the traditional and unceded territories of the many First Nations across the province and specifically the land of the Coast Salish peoples, on which SRDC's Vancouver office is located. The xʷməθkwəy̓əm (Musqueam), Skwxwú7mesh (Squamish), and Səl̓ilwətaʔ/Selilwitulh (Tsleil-Waututh) Nations have cared for this land and embraced it as a teacher since time immemorial. We are grateful for their stewardship and for the places we live and work.

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INTRODUCTION

BACKGROUND

The early care and learning (ECL) sector plays a vital role in the well-being of children and families as well as in economic recovery from pandemic-induced labour market disruptions and other downturns. The pressing need for ECL providers to continue operating during the pandemic represented an emerging opportunity to expand innovative approaches to ECL that more fully embrace time outdoors. Research has shown that time outdoors both benefits children's growth and wellbeing and reduces the spread of COVID[1].

Currently in BC, child care programs can only be licensed when they have an appropriate indoor space. Thus, those operating solely outdoors cannot be licensed and are not regulated. Technically this means anyone can open such a program, regardless of their ECL educational qualifications. There is thus a risk of licensed facilities and those who work in them being left behind in any movement towards taking early learning outdoors. The ECL sector's resilience also depends on recruiting and retaining a stable and skilled workforce. Providing meaningful professional development and supporting career advancement are among key tactics to make ECL careers more attractive as well as allowing professionals to meet their ongoing certification requirements.

The Learning Outside Together (LOT) project is a joint partnership between the BC Aboriginal Child Care Society (BCACCS), the Early Childhood Educators of BC (ECEBC), and the Social Research and Demonstration Corporation (SRDC). It is intended to incorporate traditional wisdom of Land as Teacher and promising practices related outdoor learning, to futureproof ECL primarily through the development and delivery of an outdoor learning training program for early childhood educators (ECEs). The program consists of asynchronous online materials as well as synchronous weekly meetings with other educators, guided by a peer mentor. The program is available in a cohort model, with each cohort running for about three months at a time. The project is 80 per cent funded through Future Skills Centre, with the other 20 per cent funded through an anonymous donor.

This report presents the findings from the second set of program participants, referred to as cohort 2. These findings constitute the results of the LOT impact assessment. Cohort 2 outcomes are compared with the control group (cohort 3) to draw reliable conclusions.

[1] https://www.outdoorplaycanada.ca/should-i-go-outside-in-the-covid-19-era/

PROJECT DESCRIPTION

As with cohort 1, the program was delivered through online modules hosted on the BC Early Years Professional Development Hub. Over a period of three months, participants were invited to complete ten asynchronous modules, each focusing on a particular topic related to land-based experiences. The modules contain a mixture of learning materials, including narrative interviews, written materials, and reflection exercises. Participants also received a physical welcome package, including a waterproof journal to write in and a seed and peat pod to plant at the beginning of the program. Additionally, each participant was assigned a mentor within a small group of 6-8 participants. Participants in each small group shared the same mentor, with 14 small groups in cohort 2 and 21 in cohort 3. Mentors facilitated learning circles with their small group of LOT participants to further explore the course content and support one another in their learning journey. Contact with mentors and other LOT participants occurred virtually.

This project seeks to do the following:

- Increase ECEs' knowledge and skills related to land-based experiences, and thus improve the quality and duration of children's land-based experiences. This includes knowledge and skills related to the Indigenous practices and educational concepts of "Land as Teacher" as well as "outdoor play" pedagogy.
- Increase the formal mentorship education and mentoring opportunities for ECEs.
- Support participants, via the mentors, to work through any implementation barriers to increasing time spent outdoors. Barriers include licensing requirements, available physical space, and lack of supportive workplace policies.
- Generate evidence, through the project evaluation, that demonstrates the effectiveness of the project's approaches. This evidence would be used to inform, support, and sustain implementation of these approaches long after the initial funding period has ended.
- Embrace the principles of Two-Eyed Seeing – learnings from Indigenous knowledge and ways of knowing, alongside Western knowledge, and ways of learning to the benefit of all.
- Over time, create a self-sustaining program with regular cohorts of new participants and mentors.

EVALUATION SCOPE AND METHODOLOGY

EVALUATION GOALS

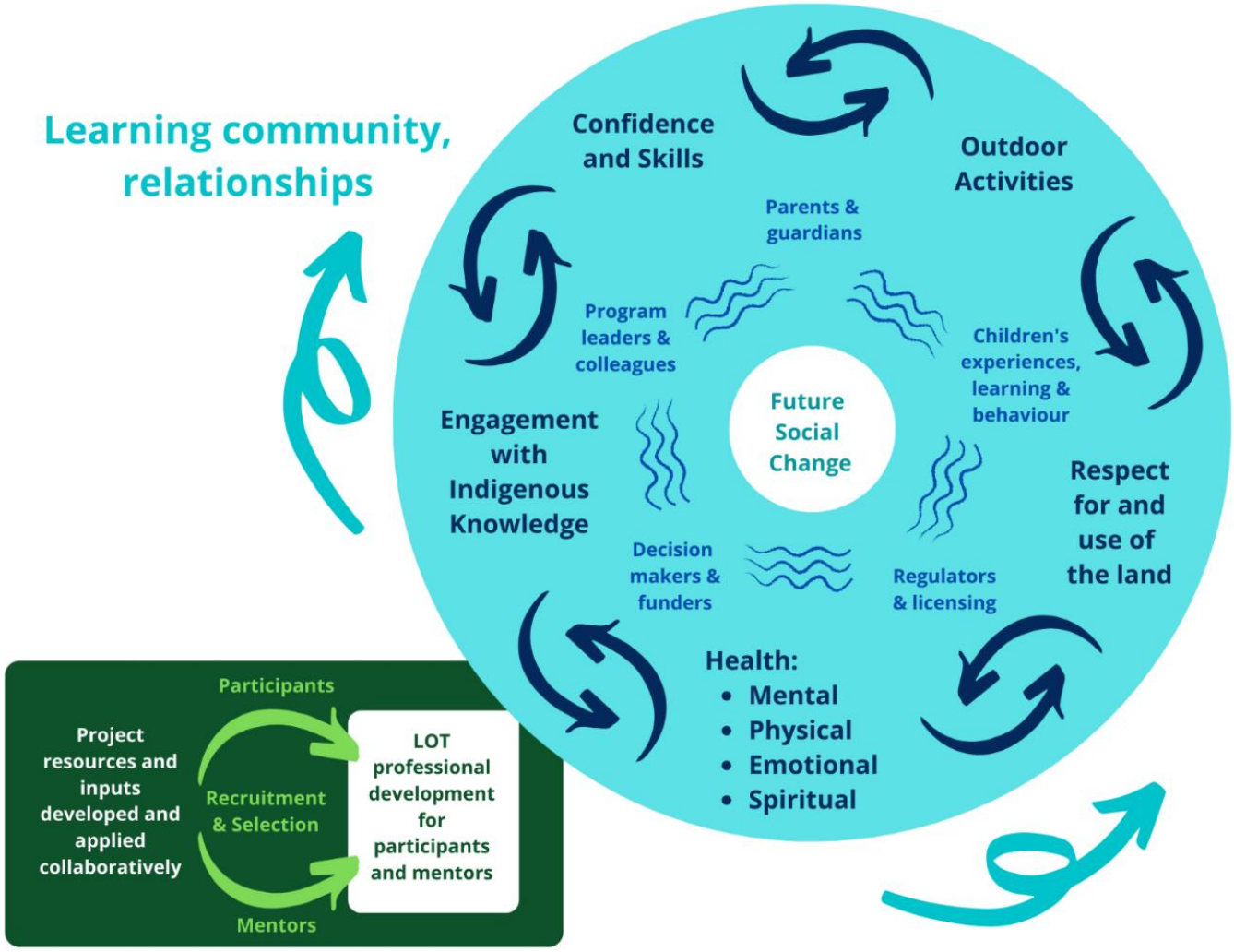
The purpose of the evaluation is to tell the story of the LOT program, including who participated in it, who runs it, and the lives touched by it. It should tell the story of what changes occurred through the LOT program's development and implementation (for the individual, sector, and broader community); and demonstrate the benefits and value of the program. It was designed with the intent that its evidence could be used post-project to demonstrate the effectiveness of the LOT program approaches and ultimately to inform, support and sustain the implementation of future efforts to incorporate Land as Teacher and outdoor play into ECL.

Theory of Change

The theory of change for the LOT program was co-developed with the LOT Steering Committee. It is a conceptual representation of how the project activities will achieve the desired outcomes, describing the multiple factors that may influence the success of the project. The theory of change is illustrated in Figure 1 below.

At the individual and sector levels, the desired outcomes from the LOT program are built on the assumptions that there is sufficient ECE uptake and demand for the program, and that a sizeable learning community is formed over time. The program incorporates both Western and Indigenous worldviews and provides an opportunity for cross cultural learning and skill development. The learning and skills developed over the course of the program itself will be shared with other ECL professionals, the sector and broader community, resulting in – it is hoped – more funders and early childhood education centres investing in LOT, with subsequent adjustments to programming, regulations and licensing being made by decision makers.

Figure 1 **Learning Outside Together Theory of Change**



At the broader community level, the desired outcomes take into consideration existing research showing a positive link between access to nature and child/youth development in several areas, including physical health, mental health, emotional well-being, resilience, and academic success (Dankiw et al., 2020).[2] Research has also linked exposure to nature in childhood with later environmental leadership (Gifford & Chen, 2016;[3] Human Environments Analysis Laboratory, 2015).[4] Ultimately, at the broader societal level, this project aims to contribute to the body of work recognizing the value of land-based programming, through the recognition of the interconnectedness of the outdoors, land, and culture with individual and community well-being (see Sangha & Russell-Smith, 2017).[5]

Evaluation Questions

The evaluation seeks to answer the following questions:

1. What is being implemented? How is it being implemented?
2. Are participants and mentors reached as intended?
3. What has been done in an innovative way?
4. How well did the program work?
5. Did the program produce or contribute to the intended outcomes in the immediate and short term? For each outcome:
    a. For whom, in what ways, and in what circumstances?
    b. What were the unintended outcomes (positive and negative), if any?
    c. To what extent can changes be attributed to the program?

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2 Dankiw, K. A., Tsiros, M. D., Baldock, K. L., and Kumar, S. (2020). The impacts of unstructured nature play on health in early childhood development: A systematic review. *PLoS ONE* 15(2): e0229006. https://doi.org/10.1371/journal.pone.0229006

3 Gifford, R., & Chen, A. (2016). *Children and nature: What we know and what we do not*. Prepared for the Lawson Foundation. Retrieved from https://lawson.ca/wp-content/uploads/2018/04/Children-and-Nature-What-We-Know-and-What-We-Do-Not.pdf

4 Human Environments Analysis Library. (2015). *Children & nature: A systematic review*. Prepared by the Human Environments Analysis Library (HEAL) of Western University on behalf of The Lawson Foundation. Retrieved from https://lawson.ca/wp-content/uploads/2018/04/YE_Systematic_Review_HEAL.pdf

5 Sangha, K. K., & Russell-Smith, J. (2017). Towards and Indigenous ecosystem services valuation framework: A North Australian example. *Conservation and Society, 15*(3), 255-269.

6. What particular features of the program and context made a difference?

7. To what extent is the LOT program self-sustaining?

EVALUATION DESIGN AND METHODOLOGY

The implementation findings from cohort 1 of the LOT program were detailed in the Interim Report. These findings were used to test the program parameters and evaluation tools, as well as to refine the approach to cohorts 2 & 3.

Data Sources

This is a mixed methods evaluation utilizing data from both quantitative (numerical or measurable) and qualitative (subjective, personal reflections) sources. Triangulation of the results was used to provide a comprehensive assessment of the LOT program, including a pre-post randomised waitlist control design described in detail in the following sections. The multiple data sources that were used to inform the evaluation of the LOT program, as well as the type of data collection, are summarized in Table 1 below.

Table 1 Data sources for the evaluation

Participant level		Quant.	Qual.
Application form and baseline survey	Everyone who applied for the program filled out an application form. A baseline survey was sent to accepted applicants at the beginning of the impact evaluation. The application form and survey collected information from consenting participants about their demographics, education and employment status, and skills and knowledge related to the course content. **For this report, there were 254 completed application forms and 216 completed baseline surveys (88 from cohort 2 participants and 128 from cohort 3 participants, representing response rates of 93% and 82% respectively)**.	✓	
Follow-up surveys	LOT participants were invited to participate in two additional surveys at three and five months after the baseline survey. The surveys repeated most of the topics from the baseline survey and for those in cohort 2, included a brief program satisfaction section. Participants received up to $60 in gift cards for the time spent completing the surveys (valued at $10 for baseline, $20 for program end, $20 for follow-up, and an additional $10 for completing all three surveys). **This report includes n=148 responses from the second survey (51 [57%] and 97 [63%] from cohorts 2 and 3 respectively) and n=172 from the third survey (59 [67%] and 113 [80%] from cohorts 2 and 3 respectively).**	✓	
Photovoice workshops	Two workshops were conducted with a small group of participants from cohort 2. The first workshop introduced participants to the photovoice method and provided tips and advice for creating narratives and taking photos in response to framing questions about the LOT program (see 0). Two weeks later, participants met to share their photos and stories, and discuss each others' perspectives. Subsequent themes emerging from the discussion, as well as illustrative narratives and photos are included in this report. Participants received a $150 gift card for their participation in this activity. The workshops took place in spring 2023, a few months after the program had ended. Written informed consent protocols were shared with participants in advance, and verbal consent was obtained at the beginning of each photovoice session. Participants understood that the activity was voluntary, and their identities would be kept private. All participants agreed that anonymous quotes, narratives, and images from the photovoice activity could be shared publicly for knowledge translation and promotional purposes. For images including adults, photo release forms were available; for privacy reasons, participants agreed not to take photographs of children. **Six participants took part in the photovoice workshops; their contributions appear throughout this report.**		✓

Partners and Steering Committee Level		Quant.	Qual.
Partner meetings	These regular meetings provided opportunities for SRDC, ECEBC, BCACCS, as well as LOT and mentorship program creators to discuss any issues and plan for activities related to program creation, recruitment, implementation, and data collection.		✓
Steering Committee meetings	These regular meetings provided opportunities for LOT partners to obtain feedback and guidance for different aspects of the LOT program. The steering committee comprised Indigenous and non-Indigenous educators, Elders, and child care professionals who guided the project and supported decision-making. This committee played a crucial role in ensuring traditional knowledge and experience were incorporated into the project.		✓
Mentor feedback	Mentors are a core component of the LOT program. The partners (including the evaluation team) received updates on the implementation and lessons learned from the mentorship program throughout the duration of the program.		✓

Eligibility and Stratification

To facilitate the pre-post randomized waitlist control evaluation design (described below), a single recruitment period was used to identify educators interested in LOT cohorts 2 and 3 during the summer of 2022. A total of 433 applications were received, with 362 representing eligible applicants. To be eligible for LOT, applicants had to meet two criteria:

1. Be certified as an ECE, and
2. Work directly with children in child care in BC

For the purposes of LOT, child care was defined as a workplace in which children were cared for by someone other than their parent/guardian and outside of a K-12 classroom. Thus, further screening was done to remove applicants who worked at family resource programs such as StrongStart or those working in Supported Child Development.

Additionally, to address the historical systemic under-investment in Indigenous early learning and child care by various levels of society, the LOT program reserved 30 per cent of seats for Indigenous educators, resulting in slightly different approaches to the random selection of Indigenous and non-Indigenous applicants (described further below).

Stratification

Stratification is a way to ensure that a random draw is balanced across key criteria. It guarantees, for example, that the number of ECEs from the Interior health authority *selected* for the LOT program is proportional to the number of ECEs from the Interior that *applied* to the program (assuming health authority is a stratification criteria).

The process to select applicants for the program occurred in two general steps: first, stratified random samples were used to **assign** the applicants to pools for either cohort 2 or cohort 3. Next, two stratified random samples were performed within each cohort to **select** applicants who would be invited to join the program – one for Indigenous applicants and one for non-Indigenous applicants. Details of each step appear below.

Stratified Random Assignment

Workplaces, rather than applicants, were the unit of stratification used for assignment to either cohort 2 or cohort 3. Thus, if two or more educators from the same workplace applied to LOT, they were grouped in the same applicant pool. This was done to minimize any potential effects of having a colleague in the LOT program. For example, if someone on the waitlist for cohort 3 had a colleague who participated during cohort 2, they might be influenced by their colleagues'

earlier participation, which could impact their survey responses (such as time spent outdoors, for example) during the "control" period.

Thus, 40 per cent of workplaces were randomly assigned to cohort 2 (since cohort 2 seats represented 40 per cent of the total sample), and the remaining 60 per cent were assigned to cohort 3. There were 278 unique workplaces in the applicant pool, with the number of applicants from each workplace ranging from 1-5. The list of workplaces used for random assignment to each cohort was stratified by health authority and then type of workplace to ensure a relatively balanced distribution of workplaces across the two cohorts.

The resulting applicant pools showed minimal differences across cohorts in proportions of health authority, workplace type, number of applicants from each workplace, number of years of experience working with children, and level of outdoor experience. One area that was slightly imbalanced was workplace setting (56 per cent compared to 71 per cent in urban settings for cohorts 2 and 3 respectively). Given the number of metrics measured, we cannot expect perfect distributions and the slight imbalance across cohort pools was deemed acceptable[6].

Stratified Random Selection

The applicant pools per cohort were separated into Indigenous and non-Indigenous applicants. Since more LOT seats were reserved for Indigenous educators than applications were received, all Indigenous applicants were invited to join LOT; for non-Indigenous applicants, stratified random selection was performed to determine an invite list. The unfilled reserved seats were re-allotted to non-Indigenous applicants in order to offer all interested applicants the opportunity to participate in the LOT program.

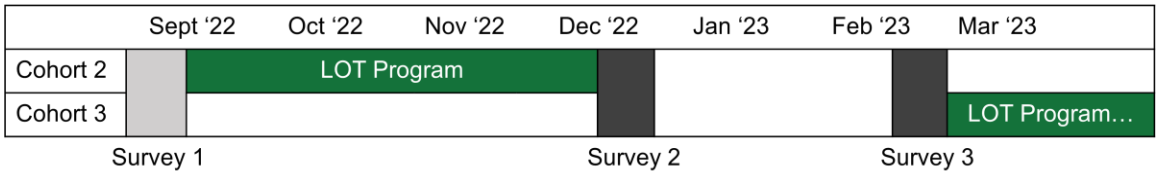
Non-Indigenous applicant pools were stratified by health authority and then workplace to ensure as many workplaces as possible were invited to participate in LOT. Fifty-four per cent of the applicant pool for cohort 2 formed the initial invitation list, and 66 per cent were invited for cohort 3[7]. However, for both cohorts, the full list was ordered so that if anyone from the initial invitation list declined, the next name on the list was invited. Three rounds of invitations in total were performed, resulting in all seats being filled.

[6] Additionally, while attempts were made to have balanced applicant pools, full control over the final cohorts is not possible based on who accepts / declines the invitation and the way the waitlists are organized.
[7] Differences in the number of applicants from each workplace meant that the samples for cohorts 2 and 3 were slightly disproportionate; thus participants from workplaces that were randomly assigned to cohort 3 had a slightly higher chance of being invited to participate in LOT.

Impact Analysis Evaluation Design

The LOT program impact evaluation was a pre-post randomised waitlist control design. As described above, 96 applicants were randomly assigned to participate in cohort 2 and 158 applicants were assigned to participate in cohort 3[8]. Cohort 2 began the LOT program in September 2022, whereas cohort 3 started the program in February 2023. Both cohorts were invited to complete a series of three surveys (baseline, end of program and approximately two months after the program ended) during the same time periods (September 2022, December 2022, and February 2023). The timeline of the survey and program administration is depicted in Figure 2 below.

Figure 2 Timeline of Program and Impact Evaluation

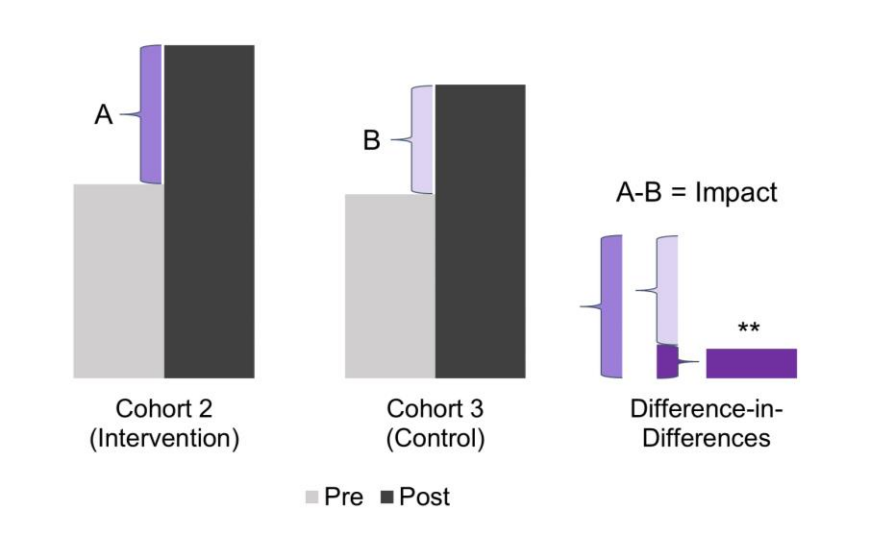


Results from the intervention group (cohort 2) were compared to results from the control group (cohort 3) to determine the effects of the LOT program. Results from Survey 2 tell us about immediate impacts of the LOT program, while those from Survey 3 establish changes that persist after the program has ended. While cohort 3 participants served as a control group in the impact analysis, their experience in the LOT program is not captured by this evaluation as their participation occurs after the evaluation timeline.

The evaluation timeline and design supported the analysis, in which difference-in-differences (DiD) estimation was used to isolate the impact of the LOT program. See Box 1 below for a description of the impact analysis design.

[8] Based on experiences with cohort 1, the LOT partnership over-recruited cohort 3 by 25 per cent, anticipating several withdrawals before and after the program began nearly six months later.

Box 1. Difference-in Differences (DiD) Estimation (mock data)



Using mock data (say, for example, child care program time spent outdoors), we can measure both cohorts 2 and 3 before the program and again after cohort 2 has completed the program. The changes observed in that time period by cohort 3 (depicted by B in the figure above) are those that occur *regardless* of the LOT program. These changes are attributable to factors that vary or grow naturally over time, such as weather, typical child development, or trusting relationships forming between ECEs and the children in their programs. By subtracting B from A (the changes observed in cohort 2), we can confidently identify the changes that occurred due to the LOT program *above and beyond those that would have occurred anyway*. The result, depicted in deep purple above, is the difference-in-differences (DiD). If the DiD is statistically significantly different than zero, we can say that the LOT program had an impact on that effect. In this example, we would state that participating in LOT resulted in increased program time spent outdoors compared to the control group.

Importantly, DiD analysis determines **group-level effects**. Since everyone who had not formally withdrawn from LOT was invited to participate in the surveys, these results are reflective of the impact of the program *as implemented*. Thus, even if the LOT program has an impact on all intended measures, if many participants do not participate in the program, then it will be more difficult to detect significant effects (i.e., the program as implemented has a low overall impact). This also interacts with response rates of the surveys. As noted above, response rates for the surveys were relatively high at 57 – 93 per cent for cohort 2 (depending on the survey); between 43 – 61 per cent of respondents in cohort 2 completed the LOT program.

Limitations

Like any study, this evaluation was not without limitations. A common issue in program evaluation is collecting balanced feedback – it can be difficult to capture the experiences of those who didn't fully participate or left the program early, even though those are often the

perspectives that most need to be heard. Further, while the evaluation design was robust, the overall sample was not large enough to support disaggregated data analysis.

Finally, despite consultation in the program planning phase, we were unable to capture participants' definitions of success when developing the theory of change and evaluation metrics; instead, we relied on indicators largely developed by the research literature and program funders. Western approaches to evaluation and project management often prioritize funders' timelines and values, and while we attempted to incorporate multiple ways of knowing into the evaluation design, the overall approach largely reflects a Western worldview.

IMPLEMENTATION

DESIGN AND DELIVERY

What was Adjusted Since Cohort 1?

The main components of the LOT project are described in the Interim Report and include the LOT curriculum, supporting materials for the LOT program, the LOT Steering Committee (LOTSC), mentors, and the program evaluation. Several adjustments were made to the project since cohort 1. Such changes are described below.

- **The LOT curriculum**. Minor adjustments were made to how groups interacted with one another on the BC Early Years Hub (where they accessed the course modules and their groups' discussion board). For example, in cohort 1, participants had access to a shared discussion board across the entire cohort; however, for later cohorts this was not available due to the way groups were set up on the Hub to support participant management for the mentors. In addition, facilitator groups were created to provide online meetings and support for the mentors (see LOT program mentors below). The course content was also adjusted slightly, based on feedback from cohort 1.

- **Supporting materials for the LOT program**. A clarified timeline and professional development hours policy was available to participants in cohorts 2 and 3.

- **The LOT Steering Committee**. The LOTSC continued to guide and advise the partners.

- **LOT program mentors**. The mentorship program was delivered as a series of webinars for cohort 2 mentors prior to the start of their cohort and delivered via the BC Early Years Hub (as originally envisioned) for cohort 3 mentors. Mentors for cohorts 2 and 3

were provided with tracking sheets to help track the professional development hours for each participant in their small group. Several cohort 2 mentors returned to mentor cohort 3; the other cohort 3 mentors were past participants of the previous cohorts.

Additionally, the way in which the small groups were formed in cohorts 2 and 3 were adjusted. In cohort 1, participants were grouped according to having a similar urban / rural / remote workplace setting, but finding a time for everyone in the group to meet became a significant challenge. Thus, groups in the current cohorts were formed based on the members' preferences for days to meet with their small group. As with cohort 1, we upheld cultural safety by ensuring that Indigenous educators were placed into groups with a minimum of two other Indigenous individuals (either participants or mentor). To support group formation, full cohorts were established before small groups were formed (i.e., no one was added from the waitlist after groups were formed, even if space became available).

Finally, mentor-facilitators were available to support mentors. Mentor-facilitators are previous LOT mentors who meet with current mentors in weekly or biweekly group meetings, in which mentors can reflect and discuss any successes and challenges.

- **The LOT program evaluation**. In addition to the planned changes described above (i.e., the impact evaluation, photovoice only instead of a focus group), incentives were added to the survey administration in an effort to increase response rates. Additionally, minor adjustments were made to some survey questions based on testing during cohort 1.

WERE PARTICIPANTS AND MENTORS REACHED AS INTENDED?

After the first round of recruitment, there were fewer applications from Indigenous educators than reserved seats, so an extended recruitment effort was held specifically for Indigenous educators via personal outreach by BCACCS and other LOTSC members. An additional 22 eligible applications were received at this time, bringing the final applicant pool to 362 (n=67 Indigenous applicants). Thus, 19 per cent of the applicant pool represented Indigenous educators.

For both cohorts 2 and 3, there were more mentors than needed to support participants. As they were not the focus of the impact analysis, mentor experiences were not evaluated in this study; however, they will be the subject of a future LOT evaluation study (see Next Steps and Recommendations section).

Participant Profile

In September 2022, 96 participants were enrolled in cohort 2 and 158 in cohort 3. Similar to the overall distribution of child care professionals in the population[9], the majority of participants identified as female between the ages of 30-65. Participants came from across the province, though educators from Northern health authority region were under-represented, especially in cohort 2. Nearly a quarter of participants across both cohorts self-identified as Indigenous.

Most participants had worked with children for 10 or more years and three-quarters had spent "lots of time" outdoors. The majority worked in group care settings; 16 per cent were self-employed.

More than half of participants were caregivers to their own child/ren, and 16 per cent cared for an adult in their household. Fewer than 5 per cent of participants identified as Francophone and nearly a quarter identified as racialized. Just over one in ten identified as a person with a disability. A full description of participant and workplace demographics appears below in Table 2 and Table 3.

Table 2 Participant demographics for those enrolled in cohorts 2 and 3

Individual characteristics		Cohort 2	Cohort 3
Identity			
	Female	98%	97%
	Male	1%	3%
	Two-Spirit	1%	0
Age range			
	15 – 29 years	13%	12%
	30 – 44 years	45%	48%
	45 – 65 years	42%	37%
	66+ years	0	3%
Indigenous (First Nations, Métis, or Inuit)		23%	25%
Years of experience working with children			
	Less than 1 year	2%	2%
	1 – 4 years	14%	17%
	5 – 9 years	25%	25%
	10+ years	58%	56%

[9] https://www150.statcan.gc.ca/n1/en/pub/75-006-x/2021001/article/00005-eng.pdf?st=7I9q3QHD

Individual characteristics	Cohort 2	Cohort 3
Outdoor experience		
Beginner (almost no time spent outdoors)	4%	1%
Not very experienced (little time spent outdoors)	17%	16%
Somewhat experienced (lots of time spent outdoors)	76%	78%
Very experienced (outdoor profession/expert skills)	2%	5%
Caregiver of child 18 or under	53%	50%
Caregiver of adult over the age of 18	17%	16%
Self-employed	14%	18%
Racialized	30%	20%
Person with disability	9%	13%
Francophone	4%	5%

Source: LOT cohorts 2 and 3 application form and baseline survey; some missing information due to incomplete baseline surveys.

Table 3 Workplace demographics for those enrolled in cohorts 2 and 3

Workplace characteristics	Cohort 2	Cohort 3
Region (health authority)		
Fraser Health	38%	30%
Interior Health	16%	18%
Northern Health	5%	10%
Vancouver Coastal Health	19%	16%
Vancouver Island Health	22%	27%
Workplace setting		
Urban (e.g., in a city)	60%	67%
Rural (e.g., adjacent to or outside a city)	35%	23%
Remote (e.g., considerably distant from a city)	5%	10%
Workplace type		
Group care	80%	83%
Outdoor child care	13%	9%
Family care	4%	7%
License-not-required/Registered license-not-required	2%	1%

Source: LOT cohorts 2 and 3 application form.

As described in the Methodology above, if two or more educators from the same workplace applied to LOT and were invited into the program, they were placed in the same cohort as one another to limit effects across cohorts. In total, 39 per cent of participants enrolled in cohort 2 and 28 per cent of participants enrolled in cohort 3 had at least one colleague in the program.

Despite the slight imbalance in the proportion of educators in urban workplace settings between the applicant pools of the two cohorts, the differences in the final cohorts were less pronounced.

Completion Rates

Before discussing completion rates, we invite readers to share in a reminder from a LOTSC member to reflect on the value judgements we place on completion. It can be tempting to assume that completing the LOT program is "positive", and thus not completing the program is "negative". However, it is **necessary to consider the validity of equating program completion with success**. Review of completion rates in isolation does not recognize that ECEs bring their personal goals and values to the program, and that someone who works hard, learns something, and then exits LOT can still be celebrated as achieving success.

With this in mind, 52 per cent of cohorts 2 and 3 (43 per cent and 57 per cent, respectively) completed the program, meaning 120 of the 233 people who *started* the LOT program completed at least 24 (80 per cent) of the required 30 hours[10].

Identifying the reasons for leaving the program wasn't always feasible, however the LOT partnership investigated this when appropriate. Informally, family emergencies and not having time to participate were common reasons. For cohort 3, another reason was the timing of the small group meetings, which did not fit their schedule once the program started (which was many months after initial recruitment).

Completion rates have been an active area of interest for the LOT partnership and LOTSC. Although the completion rate for cohorts 2 and 3 was lower than for cohort 1 (75 per cent), a completion rate of greater than 50 per cent is quite high compared to other online professional development programs[11]. Nonetheless, there are completion rate differences among participants in cohorts 2 and 3 that are worth reviewing in more detail.

[10] Individuals who initially accepted but withdrew before the program began (n=3 for cohort 2 and n=18 for cohort 3) are excluded from this calculation since their seats would have been re-filled were it not for the experimental design of cohorts 2 and 3.

[11] For example, other courses on the Early Years Professional Development Hub have an average completion rate of 36 per cent. More broadly, one estimate of massive open online courses ("MOOCs"; note these are functionally different from a program such as LOT, which is intentionally neither massive

Specifically, completion rates among the following groups were below average across both cohorts: Indigenous educators (31 per cent), those who had a colleague in the LOT program (41 per cent), those under 30 years of age (44 per cent), and those in a rural or remote setting (44 per cent). Potential explanations and future actions are further explored below in Next Steps.

Participation in LOT Over Time

Participation in the LOT program varied across weeks as well as across methods of participation. The program is designed to be completed over an 11-week period, with 10 active weeks and one break week (the timing of which is decided on by each small group). The majority of those who stopped participating and never returned over the 11 weeks, did so in the very first week (56 per cent of withdrawals in cohort 2 and 48 per cent in cohort 3). There were a handful of withdrawals in most other weeks over both cohorts, with small peaks again around the fourth week of the program.

In terms of methods of participation, each week participants could earn up to one hour of professional development for each of the following activities:

1. Completing a virtual asynchronous learning module
2. Participating in a synchronous small group meeting
3. Completing a personal reflection activity, such as sharing a photo, posting in the group discussion board, or completing a journalling exercise

While module completion was tracked automatically on the Hub, mentors were responsible for tracking hours for group meeting participation and personal reflection. Participation in these activities followed somewhat different patterns across the 10 active weeks of the LOT program, as described below.

Participation in weekly group meetings was highest in the first week for both cohorts, and then fluctuated between 45-71 per cent participation in the remaining weeks. For both cohorts, participation in group meetings was relatively high for the first half of the program and then dropped slightly in the second half. **Participation in personal reflection activities**, however, followed a slightly different pattern over the course of the program, starting high and then dipping in the middle of the program (around the sixth week), then increasing slightly again for the final few weeks. Overall, participation in the weekly personal reflection activity was slightly lower than participation in the small group meetings, with rates fluctuating between 40-65 per cent per week over both cohorts.

nor open) puts completion rates of even those who intend to complete the course at fewer than 20 per cent (Reich & Ruipérez, 2019).

FINDINGS

HOW WELL DID THE PROGRAM WORK?

This evaluation question is meant to examine whether LOT produced or contributed to the intended outcomes in the immediate and short term. For each outcome, wherever possible, the data should indicate for whom, in what ways, and in what circumstances these outcomes were achieved. In most cases, the sample size did not allow for fully disaggregated data analysis.

As a reminder, DiD analysis determines group-level effects, meaning that impact analysis results are significant for the cohort as a whole rather than for individuals. Thus, they are combined with the findings from the photovoice activities, which help to illustrate the experiences of individuals in the LOT program. While completing LOT was not a requirement of participating in photovoice, most photovoice participants had completed most of the LOT program hours.

Current and Desired Outdoor Programming

Snow Angel

"Before LOT, being outside in the snow with children was often a miserable experience. The children would often be cold and sad or just shuffle around and I wasn't helping the situation as I would be counting down the minutes until I was inside and warm. Now I find myself looking for new ideas and ways to enjoy outside regardless of how cold or snowy it is. Even something as simple as a snow angel is exciting to a child and it's my job to facilitate positive outdoor experiences and the LOT course reminded me of that."

--LOT cohort 2 photovoice participant

The impact analysis did not yield significant effects of the LOT program on most measures of outdoor programming at the group level. However, as highlighted above, narratives from the photovoice participants described meaningful changes in some participants that persisted for at least a few months after the program had ended. See APPENDIX B: for full DiD results related to outdoor programming.

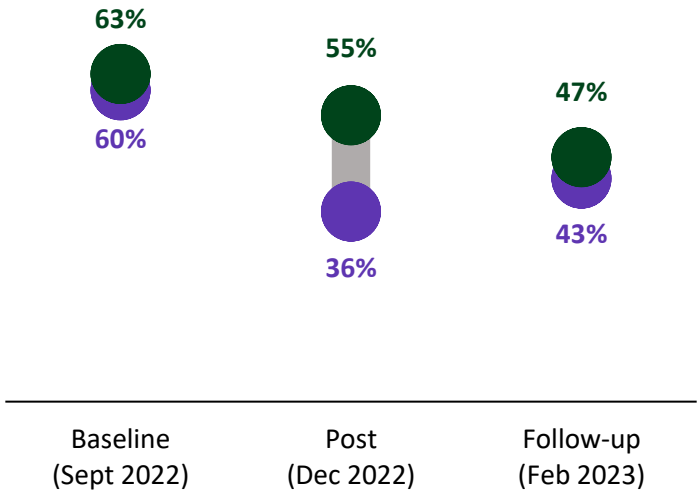
Survey results show that **participants' desired amount of child care program time spent outdoors** did not change from baseline because of the LOT program. Similarly, **motivations and beliefs** that support or impede children's outdoor play did not change; however, these ratings were already very high at baseline for both cohorts, suggesting that those who apply to the LOT program already believe that outdoor play is important for children and are motivated to support it.

There were two measures related to outdoor programming in which limited significant effects were found: improvements made to the outdoor space at the child care program and proportion of child care program time spent outdoors, both of which were observed immediately after the program ended (although did not persist two months later).

At the end of the LOT program (Survey 2), 91 per cent of respondents in cohort 2 had taken steps to **improve the physical space of the outdoor environment used by their child care program** in the past month, compared to only 73 per cent of those in the control group ($p<0.01$). Improvements could include identifying new areas to explore, adding natural elements or loose parts, or removing hazards (aside from routine safety checks). However, by the two-month follow-up survey, only 69 per cent of respondents in both cohorts reported making improvements to the outdoor space in the prior month. Photovoice participants commented how LOT motivated them to explore new, natural, open spaces with children in their program.

The **proportion of child care program time spent outdoors** varied across survey periods, as was expected based on the time of year (September to December to February). Notably, although respondents in both cohorts reported a lower proportion of child care program time spent outdoors at the end of the program compared to baseline, the decrease was more substantial for the control group (cohort 3). The difference is shown in Figure 3 below.

Figure 3 Proportion of Child Care Program Time Spent Outdoors, Cohorts 2 and 3



As a result of the experimental design of the evaluation, the difference between the cohorts at the end of the program is directly attributable to the LOT program. Photovoice participants discussed how LOT helped to change their perspective about being outdoors in cold weather in particular, and helped them find the joy in it, as highlighted in the narrative above. It served as a reminder and motivator to model positive outside experiences for children, and helped participants facilitate positive interactions with colleagues by encouraging them to enjoy the outdoors, too. Some commented on how planning something to do outdoors, such as going for a walk, encouraged the children and other educators to stay outside longer because they were engaged in an activity rather than simply waiting to go back indoors.

Indigenous Engagement

Uniting Perspectives in Our Heart - Achieving Balance Between Civilization and Nature

"The future is in our hands and we must think creatively and from the heart as we try to balance civilization and nature. To find a harmonious balance between human civilization and the environment, we must harness the power of both Indigenous and Western ways of thinking. By combining these diverse perspectives into our hearts, we can cultivate a deep respect for the present and the possibilities of the future."

--LOT cohort 2 photovoice participant

The impact analysis showed mixed results related to improving participants' engagement with Indigenous knowledge (see APPENDIX C:). There were immediate increases in participants' ratings of how often they had the opportunity to learn from Indigenous educators ($p<0.1$) and reflect on the unique history and relationships that Indigenous peoples have with the land ($p<0.01$), however these results were not sustained two months after the program. The only measure that was significant at both timepoints was an increase in participants' likelihood of **acknowledging (privately or publicly) the land-related knowledge that Indigenous Elders and Knowledge Keepers have** ($p<0.05$).

Qualitatively, photovoice participants reflected on how the concept of Two-Eyed Seeing helped them to bridge gaps, such as between urban environments and nature. It reminded them of the importance of balance and perspective-taking, acknowledging that educators must intentionally seek out different perspectives in order to combine them. For example, they reflected on embracing technology to help explore nature by using an app to identify bird species while outdoors with children. The importance of combining perspectives, rather than selecting one or another, was reiterated as participants reflected on the idea of "and, not or".

Indigenous knowledge, explored through LOT, also invited participants to appreciate aspects of one's life that are easily taken for granted, such as the land and the sky. It reminded the photovoice participants of the importance of showing children how to reflect and self-regulate by modelling those behaviours themselves. For example, one participant described suggesting going for a walk around the playground or siting on a hill and looking at clouds when they felt children needed a break. By practicing being calm in nature, they helped the children take a moment to reflect and reset rather than feeling rushed.

Skills Assessment

The clearest and most reliable impacts from the LOT program were observed in participants' skills, confidence, and knowledge related to outdoor play and Land as Teacher (see APPENDIX D:). Recall that significant effects in the impact analysis refer to significant changes in cohort 2 above and beyond those observed over the same time period for cohort 3 (control group).

Skills

All 13 self-reported measures of skills related to facilitating outdoor play and Land as Teacher pedagogy were significantly increased immediately after the program ended, and 11 were still significantly increased two months later ($p<0.1$ or lower). These ratings included skills such as "*articulating why it is important for children to be outdoors*", "*providing early care and learning in a variety of outdoor settings*", and "*advocating for myself as a valuable community member*".

Shifting the focus from structured outside play to the freedom to connect with place

"LOT has invited us to shift our focus from structured outside play for children to the importance of connecting with place in an unstructured and even a risky way. The growing need for policy around children being outdoors and in active, risky play can cause fear and uncertainty as to whether it is safe for children to be in unstructured natural settings. As I have completed LOT my hope is that we encourage early childhood spaces to go outside the boundaries of playgrounds and they are given the support from leadership working collaboratively to provide the freedom children need to develop deeper connections with place in ways that can assess risks and have flexibility."

--LOT cohort 2 photovoice participant

As noted in the narrative above, LOT invites ECEs to work collaboratively with decision-makers to develop outdoor spaces and policies that facilitate deep learning and connection for children. It encouraged photovoice participants to see outdoor play as more than "checking a box" on licensing requirements. Because they felt the education that happens outdoors seems less tangible compared to indoor education, LOT helped participants articulate what children are learning outdoors. At the same time, it provided "proof" of their own learning and helped them to start a conversation and advocate for themselves and for children.

Confidence

In a world where you can be anything, be kind.

"[The message I want to share is] the importance of looking out for others and ensuring that they are ok. Empathy builds during the early years so it is critical to not only to teach it, but to model it through our lifestyles. Small children may not be able to care for too many things, but they can tend to a garden, take care of animals and show kindness and compassion. Giving them these opportunities and showing them how to do it builds this respect of the land and everyone and everything around them."

--LOT cohort 2 photovoice participant

Across eight self-reported measures of confidence related to facilitating outdoor play and Land as Teacher pedagogy, once again all were significantly increased immediately after the program ended, and all but two were still significantly increased two months later ($p<0.1$ or lower). Respondents experienced increased confidence in areas such as "*finding ways to give children more opportunities to be outdoors*" and "*creating outdoor learning environments where every child can participate*".

A common theme among photovoice participants was around the concept of modelling lifestyles – for example, not just saying but doing. They discussed developing confidence showing children how to respect others, the land, and nature, reinforcing the idea of children as caretakers of the Earth. Participants also discussed the importance of modelling behaviour amongst other educators, too, such as showing new staff at their workplace their expectations and values around outdoor play and Land as Teacher.

Knowledge

Exploring in Nature

"Exploring in nature is beautiful."

--LOT cohort 2 photovoice participant

Among the four self-reported ratings of knowledge related to facilitating outdoor play and Land as Teacher pedagogy, all were significantly increased both immediately after the program ended as well as two months later ($p<0.1$ or lower). These ratings included statements such as "*recognizing the land as a teacher*", "*overall knowledge of the local environment*", and "*acknowledging whose ancestral land the program is located on*".

The qualitative research for this project revealed that educators often feel they are expected to justify what is being taught, which makes it challenging to allow children the freedom to explore and experiment. This type of inquiry provides important opportunities that can't necessarily be planned. LOT helped ECEs to see the land as a teacher, reinforcing the value of open, undeveloped, natural public spaces where deep learning and connection happens.

Health and Wellbeing

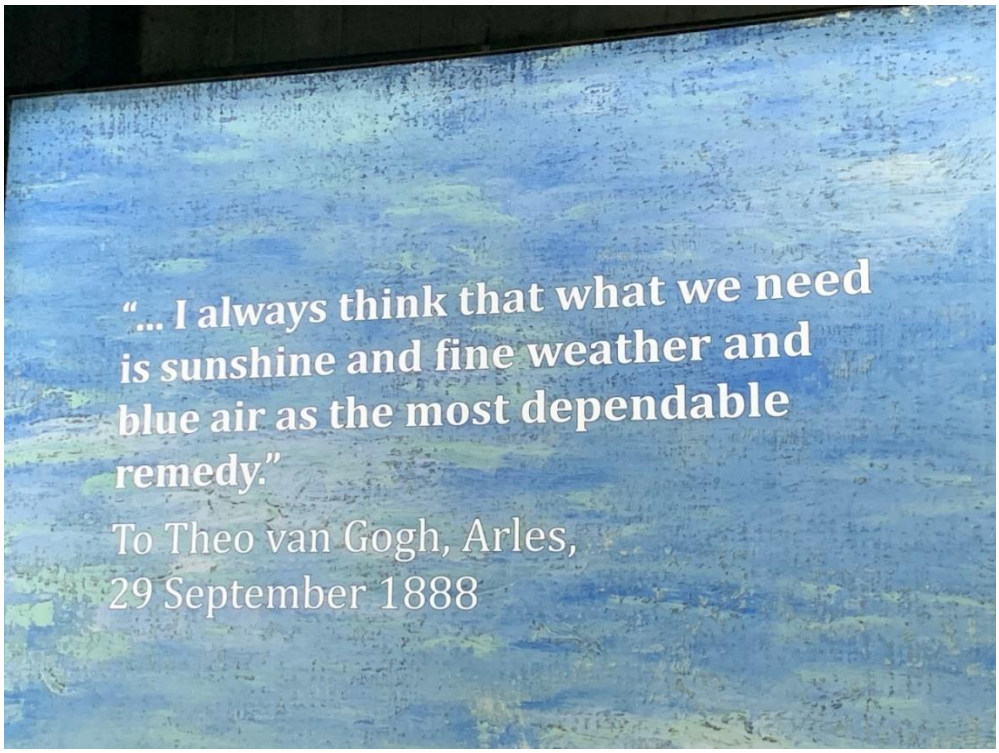
A variety of health and wellbeing measures were probed in the surveys, including feeling connected to nature, overall wellbeing, as well as workplace satisfaction and feelings of burnout. Full results are available in APPENDIX E:.

Participants in LOT were significantly more likely to feel a **strong connection/bond to nature** at the end of the program compared to baseline ($p<0.01$), but not at follow-up. One photovoice participant commented on how LOT motivated them to find ways to spend more time outside, such as getting off the SkyTrain a stop early and walking the rest of the way to work/home.

There were also immediate (but not sustained) positive effects of LOT on **overall wellbeing**, including feelings of balance physically ($p<0.1$), emotionally ($p<0.05$), and spiritually ($p<0.05$), but not mentally. Photovoice participants described some of these effects by noting how the LOT program highlighted the importance of reflection and mindfulness for educators in such busy workplaces. They commented on the importance of taking care of oneself and one another outside of work so that they could be fully present at work.

Workplace satisfaction and burnout were not impacted by the LOT program, despite hope that providing a meaningful professional development opportunity could support the retention of ECEs. Although there was not an overall significant effect on either satisfaction or burnout, individual indicators did show some changes. For example, satisfaction with relationships decreased slightly as a result of LOT both immediately (relationships with colleagues/management; $p<0.1$) and over the short-term (relationships with families of children in the program; $p<0.01$).

Remedy



"[This is a photo of] an excerpt from a letter from Vincent van Gogh to his brother, Theo van Gogh, in 1888."

"The sentiment of the excerpt is the same today as it was decades ago. This struck me as being so truthful and realistic."

--LOT cohort 2 photovoice participant

Photovoice participants shared that despite the timeless wisdom of the outdoors as a good "remedy", there is a tendency to believe that deep learning happens in a classroom and that children must be productive and efficient. These beliefs can lead to resistance among decision-makers, educators, and families in taking children outdoors, causing friction for those who advocate for children needing freedom and unstructured outdoor programming, which may shed light on the drop in satisfaction with relationships noted above. While the photovoice participants commented on how some colleagues were more receptive to improving children's time outdoors than others, overall satisfaction with relationships was not an insurmountable or critical issue.

Indeed, a central goal of the mentorship aspect of LOT was to help ECEs work through barriers that impede taking children outdoors. Nonetheless, these findings suggest that the LOT program is not sufficient for reducing ECE burnout, a growing area of concern in the field.

WHAT WERE THE UNINTENDED OUTCOMES (POSITIVE AND NEGATIVE), IF ANY?

Serene Reflection

"I used to take for granted where I live. Going through the LOT program taught me to pause and reflect and gave me fresh eyes when it comes to my surroundings and how much there is to learn from them and how to acknowledge how lucky I am to live on this land. In this moment I was trying to capture a photo of a rainbow in a cloud; the rainbow did not show up in the photo, instead I got this breathtaking shot which left me acknowledging the land and being thankful to have it as a teacher. It was almost as if the rainbow guided me to this peaceful moment of reflection."

--LOT cohort 2 photovoice participant

Although much research and expertise went into the design of LOT, some of the elements of the program were relatively novel. The partnership often embraced a willingness to try new ideas, observe the outcomes, and iterate on the learnings. In this spirit, we share here some unintended impacts of the LOT program.

In the qualitative data collection, participants described a range of experiences with their mentors that had somewhat surprising effects on their own **decisions to pursue LOT mentorship**. For example, one participant had such positive experiences with their mentor that they were deterred from becoming a mentor, feeling that they wouldn't be able to "fill the shoes" of their mentor. Another participant had a somewhat disappointing experience with their mentor, which motivated them to become a mentor – to be the mentor they wish they had. The partnership had generally assumed that one function of the mentors was to encourage interested participants to also become mentors for subsequent cohorts, hence generating a self-sustaining cycle of mentors. Overall, this pattern emerged, but the specific motivations and rationale that went into these decisions were somewhat surprising.

Another unexpected outcome was the finding that **having a colleague in the LOT program was associated with a slightly lower likelihood of completing the program**. An early idea for cohort 4 was to run the LOT program in entire centres, with colleagues completing the program together[12]. Intuitively, one might think that if having a small group and mentor was beneficial, then having all colleagues and centre management participating would produce even better outcomes. As this was an unexpected finding, we were not able to unpack it in detail in the current study, but, as noted below, a follow-up evaluation study on completion rates is being planned so that we can investigate this and other patterns further.

Although it may be tempting to label lower completion rates as a "negative" outcome, program completion is not equivalent to success. For example, perhaps those with colleagues in the program were able to absorb and benefit from the course content despite a lower time commitment (lower documented participation rate) in LOT. From this perspective, having a colleague in the program may result in going through the LOT program more efficiently than the participation rate alone would suggest.

A final unintended outcome was the **value that photovoice participants experienced from the evaluation activities**. The participants expressed gratitude and appreciation for the opportunity to reflect on the course material. They generally enjoyed the experience of taking photos and writing narratives, as well as reflecting on and reinforcing the learning from the program. Given the immense value that their participation provided to the evaluation and the project, it is especially welcome that their engagement in photovoice provided reciprocal value as well.

[12] However, these plans were not pursued for practical reasons unrelated to this finding.

TO WHAT EXTENT CAN CHANGES BE ATTRIBUTED TO THE PROGRAM?

Quiet reflection with nature

> *"[Because of LOT, I now understand that] knowledge is rooted in history and memory and requires exploration of one's own identity. Being in nature grounds us and takes us back to reflect on the Indigenous ways of being. Taking this time to reflect often requires being alone with your own thoughts."*
>
> *--LOT cohort 2 photovoice participant*

The experimental design of the impact analysis was established specifically to allow for attribution of effects to the LOT program. The random assignment to cohorts 2 and 3 meant that the only systematic difference between the cohorts was the presence of the LOT program for cohort 2. As a result, any significant effects noted in the DiD design are directly attributable to LOT. The photovoice participants further confirmed how their participation in the LOT program

influenced their activities, attitudes, and behaviours, as described throughout the report. A summary of the DiD effects are shown below in Figure 4.

Figure 4 Summary of DiD Effects in Intended Outcomes Attributable to LOT

Outcome	Immediate	Short-term	Description of Changes
Outdoor Programming	~	X	• Motivations already high at baseline; no change. • Increased immediate improvements to outdoor spaces. • Increased immediate proportion of time spent outdoors with children.
Health and Wellbeing	~	X	• Immediate increase in wellbeing. • No overall change in satisfaction with work or burnout.
Engagement with Indigenous Knowledge	~	~	Limited change: immediate and sustained increased recognition of Indigenous Elders' and knowledge keepers' land-related knowledge.
Skills, Confidence, and Knowledge	✓	✓	Robust and sustained increases.

WHAT PARTICULAR FEATURES OF THE PROGRAM AND CONTEXT MADE A DIFFERENCE?

Photovoice participants described a variety of ways in which the specific features of the LOT program were unique or made a difference in their professional development. For example, even though LOT is predominantly delivered as an online program, it also **requires participants to perform activities outdoors and engage in personal reflection**. Photovoice participants described how being in nature helped solidify their understanding of Land as Teacher. The program and its components also provided a sense of grounding to embrace what nature can teach us, both by being outdoors and through guided mindfulness exercises.

Being in the same place, at the same time, with all our different perspectives

> *"[The message I want to share about LOT and what was unique about it is] coming together with different perspectives for one main purpose to be outside in nature with children. We are sharing ways for deeper connections to place and noticing the world that we live in and how we can start to see the environment not as a setting but as another teacher."*
>
> *--LOT cohort 2 photovoice participant*

Another way that LOT made a difference was through **intentionally bringing together educators with different perspectives** to be outside with children. Photovoice participants described how people from different backgrounds and perspectives will see different meanings in the same scenario. Valuing these different perspectives reminded participants to see the outdoors not as a setting but as another teacher.

Although many of the LOT participants had some outdoor experience prior to joining the program, photovoice participants noted that LOT was able to accommodate a wide variety of entrants and skill levels. It was said that all ECEs – from those who were very new to very experienced outdoors – could get something valuable from the LOT program.

Having a **built-in mentorship component** similarly allows those who want to deepen their learning and engagement to do so. This "advanced" course further helped interested participants to build their expertise; photovoice participants who were also mentors commented on how it increased the likelihood of being taken seriously by others, such as colleagues and management, when it came to issues related to outdoor programming and Land as Teacher.

Standing Strong Together

"[This is a photo of] a row of trees that are still growing and holding the rest of the hill up, thanks to their shared root system, even though a large chunk of the ground beneath them has washed away.

[The message I want to share about LOT in this image is] the importance of connection, trust, and support not only between fellow ECEs, but also between all people and people and nature. We are all connected and interdependent and this makes everyone and everything stronger in the end. Working as a team, sharing resources, and supporting one another is how life should be."

--LOT cohort 2 photovoice participant

Further, as described in the narrative above, the importance of **learning together** was prominently covered. LOT showed participants how to work together to solve problems and support one another rather than competing for a limited supply of resources. Photovoice

participants also described how LOT helped break the myth that licensing officers are "scary" or "out to get you"; it showed the value of ECEs advocating for children as a united front.

Having a **learning community** (e.g., weekly group meetings, online discussion boards, etc.) helped differentiate LOT from other online programs and may have contributed to the higher completion rates observed in LOT compared to other programs that educators complete as individuals. More than 90 per cent of survey respondents agreed that the learning community contributed to learning new pedagogy in the end-of-program survey for cohort 2 (cohort 3 participants did not complete such a survey).

TO WHAT EXTENT IS THE LOT PROGRAM SELF-SUSTAINING?

Nature in Our Hearts – Incorporating Nature into Teaching and the Hearts of Children

"As educators, it is our responsibility to incorporate natural materials into learning experiences to teach children to value and appreciate the world around them."

--LOT cohort 2 photovoice participant

Program satisfaction ratings from cohort 2 at the end of the program showed a **high degree of satisfaction among survey respondents**. Two-thirds were 'very satisfied' with their overall experience and another 16 per cent were 'somewhat satisfied'. More than half of respondents had already recommended the LOT program to a colleague, and none of the respondents said that they would *not* recommend the program.

For both cohorts, **more mentors than needed** were secured to support the subsequent cohort. This further supports the notion that the program provides value, particularly for those who complete and would like to continue to engage with LOT. From an administration perspective, having extra mentors has been an important feature to support last-minute scheduling changes.

Despite these positive findings, **application numbers dropped dramatically** from the first cohort to the second / third, though they remained relatively stable for cohort 4. Nonetheless, there may be a dwindling supply of ECEs who meet the current eligibility criteria and can dedicate 30+ hours of their time to LOT. It also seems unlikely that, without changes, LOT could continue to recruit 30 per cent Indigenous participants given the challenges in the last application period. Further exploration into the sustainability of LOT is currently underway.

NEXT STEPS AND RECOMMENDATIONS

NEXT STEPS

Cohort 4 of the LOT program is the final funded cohort, and recruitment is currently underway at the time of writing this report. Some minor changes have been made to the program based on experiences to date, such as incorporating more breaks into the schedule to allow those who miss any component a better chance to catch up with the rest of the group.

Additionally, there will be an opportunity to learn more about the experiences of entire centres completing the LOT program together thanks to an **upcoming collaboration between LOT and a research study called PRO-ECO 2.0** ("PROmoting Early Childhood Outside").

PRO-ECO 2.0 is a research project supporting outdoor play in BC's child care centres, led by researchers at the University of British Columbia and Vancouver Island University[13]. PRO-ECO 2.0 has recruited child care centres across the province to develop the following elements:

1. Updated outdoor play policies;
2. Early childhood educator training and mentorship;
3. Family, Elder, and community engagement;
4. Outdoor space modifications

Building on a pilot study launched in 2020 that determined more support for centre staff was needed, the training and mentorship component of PRO-ECO 2.0 will be the LOT program. At the same time, mentors in the LOT program noted how it sometimes felt like an "uphill battle"

[13] https://playoutsideubc.ca/pro-eco-2/

for individuals who were working in centres with colleagues that did not value outdoor play and Land as Teacher in the same way.

As one hope of the LOT program is to maximize its reach and sustainability, the opportunity to embed LOT in a broader project such as PRO-ECO was a welcome and unanticipated outcome. The partnership is eager to support this collaboration and learn how this altered implementation of LOT serves the program participants. PRO-ECO will allow the LOT program to reach a wider variety of audiences, such as entire centres, Responsible Adults and ECE Assistants, and those receiving targeted in-centre investment and support; although the experiences of these groups are not among the core research questions for PRO-ECO, we hope to learn more about how LOT is received among different audiences.

PRO-ECO also collects data on children's experiences, which was out of scope of LOT but an area of interest for the partners and LOTSC. Although much previous research demonstrates the value of outdoor play for children, the partnership is eager to learn more about the experiences of children in the care of ECL professionals in the LOT program.

PRO-ECO 2.0 will run through to the summer of 2024. This will take place according to its own timeline and recruitment, though will integrate mentors who were previous participants of cohorts 1-4.

The LOT partnership is also actively looking for ways to share our learning, including conferences and creating promotional videos. One of the goals of these products is to secure additional funding for future cohorts of LOT. The partnership is also actively looking for ways to document the processes that the partnership, collaborators, and the LOT Steering Committee took that led to the current outcome. The process of engagement with one another was relatively unique and may be of value for others hoping to create their own, local, land-based ECL programs.

In the meantime, **there are two follow-up qualitative evaluation activities planned**:

- First, we will conduct focus groups with mentors and mentor-facilitators to better understand the experiences of individuals as they move from participant to mentorship roles in LOT. The main goals are to uncover the value of the mentorship component of LOT, any barriers faced, and suggestions to improve the LOT program for both participants and mentors.

- Additionally, as completion rates were not deemed to be an issue in the pilot phase of the LOT project, the impact evaluation did not have the protocols or budget to investigate this issue as it arose. Thus, any explanations for why the LOT program was more likely to be completed by some groups than others are speculative. For this reason, the LOT partnership has consulted with mentors and the LOTSC to better understand some of the issues and is

planning for a separate evaluation focused exclusively on individuals who partially completed the LOT program. Attrition is a natural part of every program, but further investigation may determine if any aspects of the LOT program can be adjusted to better support those who would like to complete it. For both follow-up studies, we will attempt to recruit individuals from all cohorts of the LOT program.

RECOMMENDATIONS

Following the implementation evaluation of cohort 1, several recommendations were produced and carried out. Many of the changes made to the program are the result of helpful feedback from individuals who are passionate about the LOT project. Further recommendations for review are listed below, some of which have already been incorporated into cohort 4.

- Make the LOT program more accessible to help ensure that there is a steady supply of educators to participate and that these educators are well-supported to complete the program. This could include:
    - Expanding eligibility criteria to include anyone working directly with children in BC, such as ECE Assistants and those working in StrongStart BC Centres and/or family resource programs. As noted in earlier cohorts, rigid eligibility criteria are particularly exclusionary to Indigenous educators, who are more likely to apply from non-standard workplaces.
    - Making the program shorter or relaxing the timelines to allow opportunity for those who miss any components time to catch up.
    - Having a hard copy version of the program.
- Increase transparency about dates and timelines and provide more notice regarding small group meeting schedules.
- Implement more support for mentors, including technical and administrative support; ensure that mentors can contact participants in their group outside of the Hub.
- To improve sustainability, invite participants to form their own communities of practice, or create one for them, that persists after the course has ended. This could also include scheduling a follow-up meeting a few months after the program ends.

The lifecycle of knowledge. New growth emerging from old growth

"The foundation of learning comes from our ancestral past, in this case, the old growth forest. A nutrient rich outdoor environment is essential for children's healthy development.

--LOT cohort 2 photovoice participant

APPENDIX A: PHOTOVOICE REFLECTION SHEET

Framing Questions (select one): What image would you take if you were to: ☐ Tell a friend about the LOT program and what was unique about it? ☐ Showcase your work activities before and after LOT? ☐ Demonstrate how your understanding of Indigenous knowledge / Land as Teacher has evolved as a result of the LOT program? ☐ Share an important message about LOT with decision-makers (e.g., program developers / administrators, funders, licensing officers, etc.)?
When and where the photo was taken:
This is a photo of:
The message I want to share about this photo is:
The title/caption for this photo is:

APPENDIX B: OUTDOOR PROGRAMMING DIFFERENCE IN DIFFERENCES RESULTS

	Control			Program							
Items	Pre	Post	Follow-Up	Pre	Post	Follow-Up	Post DiD		Post Standard Errors	Follow-Up DiD	Follow-Up Standard Errors
Desired Outdoor Programming	3.78	3.66	3.62	3.55	3.60	3.47	**0.16**		(0.16)	**0.08**	(0.16)
Faciliatory Beliefs: I have seen children manage outdoor play before and trust they can handle it	5.16	5.09	5.17	4.93	5.33	5.22	**0.47**	*	(0.25)	**0.27**	(0.24)
Faciliatory Beliefs: I want to support children who want to go outdoors	5.54	5.41	5.29	5.54	5.42	5.60	**0.00**		(0.20)	**0.30**	(0.20)
Faciliatory Beliefs: It is important that children learn, build skills, and try new challenges	5.84	5.81	5.81	5.91	5.87	5.84	**0.00**		(0.12)	**-0.03**	(0.12)
Faciliatory Beliefs: Being outdoors is a good learning opportunity for children	5.91	5.81	5.84	5.86	5.92	5.86	**0.16**		(0.11)	**0.07**	(0.11)
Impeding Beliefs: I am concerned that the children in my program are going to get seriously hurt	2.08	2.12	1.99	2.13	1.94	2.12	**-0.24**		(0.15)	**0.08**	(0.15)
Impeding Beliefs: I think the children do not know how to stay safe	2.13	2.17	2.15	2.26	2.12	2.23	**-0.19**		(0.17)	**-0.06**	(0.16)
Impeding Beliefs: I am worried that someone is going to harm the children	1.67	1.67	1.63	1.65	1.59	1.61	**-0.05**		(0.16)	**0.01**	(0.15)
Impeding Beliefs: I am concerned that parents or colleagues are going to think I am a bad educator for letting the children take risks	2.00	2.13	2.12	1.96	2.08	2.02	**0.00**		(0.20)	**-0.04**	(0.19)
Improved Outdoor Environment	0.84	0.73	0.69	0.75	0.91	0.69	**0.27**	***	(0.10)	**0.08**	(0.10)

Note: *p<0.1, **p<0.05, ***p<0.01

APPENDIX C: ENGAGEMENT WITH INDIGENOUS KNOWLEDGE DIFFERENCE IN DIFFERENCES RESULTS

	Control			Program							
Items	Pre	Post	Follow-up	Pre	Post	Follow-up	Post DiD		Post Standard Errors	Follow-up DiD		Follow-up Standard Errors
Learned from Indigenous educators	2.23	2.12	2.32	2.24	2.59	2.60	**0.47**	*	(0.28)	**0.28**		(0.27)
Acknowledged (privately or publicly) the land-related knowledge that Indigenous Elders and Knowledge Keepers have	2.61	2.60	2.82	2.39	3.07	3.17	**0.69**	**	(0.29)	**0.57**	**	(0.27)
Appreciated (privately or publicly) holders of knowledge related to enhancing human-land interaction	2.74	2.76	2.79	2.68	3.03	3.13	**0.33**		(0.29)	**0.41**		(0.27)
Had an opportunity to be inspired by an Indigenous educator	2.46	2.48	2.56	2.38	2.78	2.94	**0.37**		(0.29)	**0.47**	*	(0.28)
Reflected on the unique history and relationships that Indigenous peoples have with the land	2.96	2.82	3.07	2.70	3.32	3.25	**0.76**	***	(0.28)	**0.45**		(0.27)

Note: *p<0.1, **p<0.05, ***p<0.01

APPENDIX D: SKILLS, CONFIDENCE, AND KNOWLEDGE DIFFERENCE IN DIFFERENCES RESULTS

	Control			Program							
Items	Pre	Post	Follow-up	Pre	Post	Follow-up	Post DiD		Post Standard Errors	Follow-up DiD		Follow-up Standard Errors
Skills: Knowledge of suitable outdoor spaces to bring children	3.15	3.29	3.22	3.10	3.64	3.46	**0.39**	*	(0.21)	**0.28**		(0.20)
Skills: Awareness of local resources, organizations, or communities that can help improve outdoor spaces	2.17	2.20	2.26	2.18	2.74	2.84	**0.53**	**	(0.24)	**0.58**	**	(0.23)
Skills: Knowledge of the benefits of being outdoors	3.75	3.68	3.70	3.64	4.10	3.98	**0.52**	***	(0.20)	**0.39**	**	(0.18)
Skills: Articulating why it is important for children to be outdoors	3.43	3.31	3.34	3.36	3.92	3.90	**0.68**	***	(0.22)	**0.63**	***	(0.21)
Skills: Incorporating elements of outdoor play into programs	3.15	3.06	3.06	2.95	3.81	3.58	**0.95**	***	(0.25)	**0.72**	***	(0.23)
Skills: Providing early care and learning in a variety of outdoor settings	3.04	2.95	2.93	3.04	3.68	3.54	**0.74**	***	(0.25)	**0.62**	***	(0.23)
Skills: Teaching culturally specific curriculum to children	2.37	2.25	2.29	2.39	2.72	2.89	**0.44**	*	(0.24)	**0.58**	***	(0.22)
Skills: Incorporating new pedagogy into programs	2.53	2.65	2.55	2.41	3.10	2.98	**0.57**	**	(0.24)	**0.55**	**	(0.22)
Skills: Providing a high-quality early care and learning environment for all children	3.54	3.48	3.50	3.52	3.98	3.78	**0.51**	**	(0.21)	**0.30**		(0.20)
Skills: Demonstrating leadership within my workplace	3.47	3.44	3.37	3.41	3.79	3.77	**0.41**	*	(0.23)	**0.46**	**	(0.22)
Skills: Understanding how to foster positive and productive relationships with licensing officers	3.26	3.21	3.24	3.09	3.45	3.48	**0.41**	*	(0.23)	**0.42**	*	(0.22)
Skills: Advocating for myself as a valuable community member	3.25	2.93	3.11	3.10	3.55	3.40	**0.77**	***	(0.23)	**0.45**	**	(0.22)
Skills: Communicating how and why my work is essential	3.44	3.21	3.24	3.34	3.71	3.62	**0.61**	**	(0.24)	**0.48**	**	(0.23)

	Control			Program							
Items	Pre	Post	Follow-up	Pre	Post	Follow-up	Post DiD		Post Standard Errors	Follow-up DiD		Follow-up Standard Errors
Confidence: Find ways to give the children more opportunities to be outdoors	3.81	3.65	3.60	3.69	4.11	3.96	**0.57**	***	(0.17)	**0.47**	***	(0.16)
Confidence: Negotiate with licensing officers to receive approval for the outdoor environments that you want to create	3.18	3.12	3.15	2.99	3.40	3.33	**0.47**	**	(0.23)	**0.37**		(0.23)
Confidence: Resist the urge to intervene when children do outdoor play	3.88	3.84	3.83	3.68	4.05	4.01	**0.41**	**	(0.18)	**0.38**	**	(0.18)
Confidence: Manage parental/family concerns about their children being outdoors	3.81	3.61	3.75	3.72	3.98	3.90	**0.47**	***	(0.17)	**0.23**		(0.16)
Confidence: Convince your colleagues to support your intention to let the children do more outdoor play	3.88	3.68	3.65	3.76	3.95	3.91	**0.38**	*	(0.20)	**0.37**	*	(0.19)
Confidence: Model curiosity and positive feelings about the outdoors for the children in your program	4.08	3.98	4.02	3.85	4.15	4.08	**0.39**	**	(0.17)	**0.29**	*	(0.15)
Confidence: Create outdoor learning environments where every child can participate	3.78	3.70	3.74	3.66	4.08	3.96	**0.51**	***	(0.18)	**0.35**	**	(0.17)
Confidence: Provide the children in your program the opportunity to participate in a variety of play and learning experiences	3.93	3.87	3.78	3.78	4.15	4.09	**0.44**	**	(0.17)	**0.46**	***	(0.16)
Knowledge: Acknowledging whose ancestral land the program is located on	2.53	2.38	2.48	2.58	2.97	3.10	**0.53**	*	(0.29)	**0.57**	**	(0.27)
Knowledge: Recognizing the land as a teacher	3.06	2.96	3.04	3.05	3.53	3.55	**0.58**	**	(0.28)	**0.51**	**	(0.26)
Knowledge: Identifying local plants and animals	2.35	2.31	2.40	2.40	2.78	2.87	**0.41**	*	(0.24)	**0.42**	*	(0.24)
Knowledge: Overall knowledge of the local environment	2.56	2.47	2.68	2.53	3.05	3.25	**0.60**	**	(0.24)	**0.60**	***	(0.22)

Note: *p<0.1, **p<0.05, ***p<0.01

APPENDIX E: HEALTH AND WELLBEING DIFFERENCE IN DIFFERENCES RESULTS

	Control			Program							
Items	Pre	Post	Follow-up	Pre	Post	Follow-up	Post DiD		Post Standard Errors	Follow-up DiD		Follow-up Standard Errors
Strong connection/bond to nature	3.97	3.82	3.90	3.94	4.41	3.94	**0.61**	***	(0.22)	**0.07**		(0.21)
In balance: Physically	3.41	3.26	3.37	3.33	3.51	3.52	**0.33**	*	(0.19)	**0.23**		(0.17)
In balance: Emotionally	3.49	3.36	3.45	3.42	3.69	3.55	**0.40**	**	(0.17)	**0.17**		(0.16)
In balance: Mentally	3.48	3.40	3.46	3.47	3.58	3.56	**0.19**		(0.18)	**0.11**		(0.16)
In balance: Spiritually	3.47	3.26	3.39	3.29	3.60	3.57	**0.52**	**	(0.23)	**0.36**	*	(0.22)
Burnout: The work I do is stimulating and challenging	3.96	3.91	3.98	3.86	4.27	4.01	**0.46**	**	(0.19)	**0.13**		(0.18)
Burnout: I feel physically exhausted at the end of the day	3.38	3.47	3.50	3.68	3.67	3.65	**-0.10**		(0.21)	**-0.16**		(0.19)
Burnout: My work gives me a sense of accomplishment	4.16	4.00	4.02	4.14	4.27	4.10	**0.29**		(0.18)	**0.09**		(0.17)
Burnout: There is too little time to do all that needs to be done	3.68	3.55	3.70	3.61	3.83	3.79	**0.36**		(0.22)	**0.16**		(0.21)
Burnout: My work is important	4.68	4.58	4.70	4.66	4.71	4.59	**0.15**		(0.14)	**-0.09**		(0.13)
Burnout: Workplace policies and procedures are well-defined	3.91	3.82	3.83	3.97	4.15	3.93	**0.28**		(0.20)	**0.04**		(0.19)
Burnout: I feel frustrated by this job	2.47	2.66	2.58	2.57	2.55	2.72	**-0.21**		(0.20)	**0.05**		(0.20)

	Control			Program							
Items	Pre	Post	Follow-up	Pre	Post	Follow-up	Post DiD		Post Standard Errors	Follow-up DiD		Follow-up Standard Errors
Burnout: I have reasonable control over most things that affect my job satisfaction	3.61	3.50	3.57	3.74	3.68	3.59	**0.06**		(0.19)	**-0.12**		(0.20)
Burnout: My job makes good use of my skills and abilities	4.10	3.90	3.93	3.97	4.19	4.08	**0.42**	**	(0.19)	**0.27**		(0.18)
Burnout: My work allows me to respond to my personal or family needs	3.97	3.96	3.94	3.86	3.88	3.65	**0.03**		(0.20)	**-0.19**		(0.19)
Satisfaction: Physical outdoor space of your workplace	3.60	3.75	3.74	3.63	3.39	3.34	**-0.39**		(0.32)	**-0.43**		(0.31)
Satisfaction: Resources or equipment for children to use outdoors	3.89	3.44	3.37	3.44	3.33	3.66	**0.35**		(0.36)	**0.75**	**	(0.34)
Satisfaction: Opportunities to advance in my career	4.03	3.94	4.02	3.97	3.80	3.49	**-0.08**		(0.39)	**-0.47**		(0.36)
Satisfaction: Opportunities for ongoing professional learning	3.87	3.44	3.61	3.77	3.78	3.51	**0.45**		(0.29)	**0.02**		(0.27)
Satisfaction: Ability to access a strong community of practice	4.05	3.96	3.76	4.03	4.04	3.62	**0.10**		(0.36)	**-0.11**		(0.33)
Satisfaction: Relationships with centre management/co-workers	3.58	3.73	3.55	3.83	3.53	3.44	**-0.45**	*	(0.27)	**-0.37**		(0.25)
Satisfaction: Relationships with families you work with	3.54	3.59	3.68	3.75	3.75	3.40	**-0.05**		(0.20)	**-0.48**	***	(0.18)
Satisfaction: Job security	3.60	3.68	3.70	3.70	3.50	3.50	**-0.27**		(0.22)	**-0.30**		(0.23)
Satisfaction: Job overall	3.65	3.71	3.55	3.78	3.46	3.53	**-0.39**		(0.24)	**-0.15**		(0.24)

Note: *p<0.1, **p<0.05, ***p<0.01

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