Let's Count: Success and expansion

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This symposium reports on recent developments for *Let's Count*, the preschool mathematics program implemented across Australia since 2010 by The Smith Family, a national, independent children's charity helping disadvantaged Australians to get the most out of their education, so they can create better futures for themselves. *Let's Count* is an early mathematics program that has been designed to assist educators in early childhood contexts to work in partnership with parents and other family members to promote positive mathematical experiences for young children (3-5 years). The program aims to foster opportunities for children to engage with the mathematics encountered as part of their everyday lives, talk about it, document it, and explore it in ways that are fun and relevant to them. The success of *Let's Count* has been reported many times at MERGA conferences, including the Beth Southwell Practical Implications Award paper in 2016.

The papers presented in the symposium will build on the success of *Let's Count* by considering a number of recent initiatives in delivery and scaling up of the project in order to make it available to a more extensive set of participants across Australia and internationally. Based on a series of program evaluations, the three papers in the symposium will consider delivery methods beyond the usual face-to-face workshop presentations to early childhood educators and will anticipate future developments as *Let's Count* undergoes a program revision during 2020-2021.

The proposed symposium program is as follows.

Introduction to Let's Count (Bob Perry) – 5 minutes

Paper 1: Ann Gervasoni & Anne Roche *Let's Count* in an online environment

Paper 2: Amy MacDonald & Paige Lee *Let's Count* in early childhood teacher education

Paper 3: Sue Dockett & Bob Perry *Let's Count* and community professionals

Discussant – Wendy Field, Head, Programs and Policy, The Smith Family - 10 minutes

Questions and Discussion

The symposium will be chaired by Bob Perry and there will be ample time for discussion and questions.

Let's Count in an online learning environment

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Let's Count Online is a new e-learning approach to delivering *Let's Count* professional learning. It was evaluated in 2018. The findings suggest that the e-learning platform was successful, and that the outcomes for educators were similar to those achieved by participants using the face-to-face workshop professional learning model. Several key differences in outcomes were noted, and these inform recommendations for refining *Let's Count Online*.

Introduction

Let's Count (Gervasoni & Perry, 2017) is an early mathematics program that assists educators, in early childhood contexts, to work in partnership with parents and other family members to promote positive mathematical experiences for young children. Professional learning associated with *Let's Count* was first offered for educators in 2010 using a face-to-face workshop learning environment and between session activities and investigations. Following the positive evaluation of *Let's Count*, (Gervasoni & Perry, 2015a, 2015b; Perry et al., 2016), The Smith Family received Federal Government support to make *Let's Count* available to more communities across Australia. It was then decided to develop and pilot a complementary e-learning professional learning approach, *Let's Count Online,* with the capacity to reach more educators across Australia.

An important goal when developing *Let's Count Online* was maintaining the successful outcomes achieved through the original *face-to face* professional learning model. For this reason, *Let's Count Online* was evaluated in 2018 to determine the extent to which the outcomes achieved by educators who participated in the *Let's Count Online* course were similar to or varied from the outcomes achieved by educators who participated in the face-to-face model during the *Let's Count* longitudinal evaluation (Gervasoni & Perry, 2015a, 2015b; Perry et al., 2016). It was anticipated that the evaluation findings would assist The Smith Family to determine the effectiveness of the *Let's Count Online* platform for delivering the professional learning underpinning the *Let's Count* initiative for families. The evaluation also sought to gain insight about participants' experiences of the e-learning platform, and its effectiveness, so as to recommend any improvements for the *Let's Count Online* Course. The evaluation method and findings are presented in this paper, along with recommendations for further developing *Let's Count Online*.

Evaluation Method

The *Let's Count Online* evaluation used a mixed methods approach, drawing on both quantitative and qualitative approaches. Data were collected through online surveys, and telephone interviews with participants. The design of the surveys and interview schedules were informed by the instruments used in the *Let's Count* Longitudinal Evaluation (Gervasoni & Perry, 2015a) to enable valid comparisons to be made between the participant outcomes for the two program delivery formats.

All those who registered for *Let's Count Online* during the 2018 evaluation period (*n*=814) were invited to participate in the evaluation and complete two online surveys – one prior to commencement of the *Let's Count Online* course (Time 1) and two weeks after

completion of the course (Time 2). The Time 1 (T1) survey was completed by 207 participants and the Time 2 (T2) survey by 60 participants. Thirty-three participants completed both surveys. Participants were drawn from every state and territory in Australia. Telephone interviews with seven case-study participants took place twice – two weeks after the commencement of the e-learning course and two weeks after its completion. The duration of the course was approximately 8 weeks and took place at a time of participants' choosing.

Qualitative and quantitative data from the surveys were used in conjunction with interview data to provide a picture of any changes in the respondents' reported attitudes to mathematics and mathematical pedagogies, and the effectiveness of the e-learning platform for professional learning. Data from the *Let's Count Online* Evaluation were compared with findings from the *Let's Count* Longitudinal Evaluation (Gervasoni & Perry, 2015a) to determine whether the outcomes for participants varied in respect to their mathematics dispositions, skills, and levels of confidence in developing children's mathematical knowledge. Data were also analysed to determine how *Let's Count Online* might be improved to deliver the *Let's Count* professional learning program more effectively.

Key Findings

A summary of the key evaluation findings is presented below. Of particular interest are comparisons between educators' dispositions, skills and confidence; their attitudes to a range of teaching strategies; and their engagement with the professional learning models.

Dispositions, Skills and Confidence of Educators

With respect to educators' attitudes to mathematics (either increasing or decreasing) between T1 and T2 surveys, the findings showed that these were similar for most statements for both the online and face-to-face cohorts. For example, for both programs at T2 there was an increase in the proportion of participants who believed *mathematics is something that I do every day,* and *their liking of maths*. Also, the *Let's Count Online* participants' confidence in developing children's mathematical knowledge increased more than for the face-to-face course participants, however, their confidence was lower overall.

Educators' Attitudes to a Range of Mathematical Teaching Strategies

At both T1 and T2, educators were presented with 24 statements about a range of mathematical teaching strategies and asked to indicate whether they agreed or disagreed on a five-point Likert scale. For 15 of the 24 statements, the initial and final percentages, as well as the change in percentage, are relatively similar between participants in the two programs. In contrast, for some statements there was a reduction in the proportion of educators in the face-to-face program who indicated that they agreed with the statement from T1 to T2, but this proportion increased for the online course participants. These statements suggest that the online course appeared to have promoted, for some participants, pedagogies that were more school like or traditional, than did the face-to-face course. These trends are reflected in the increased 'schoolification' of much of early childhood education (Moss, 2013), but are not well-aligned to approaches recommended for mathematics education in the early years. Illustrative statements were:

It is important that children represent their mathematics through the use of conventional symbols.

Workbooks and worksheets are essential in learning and teaching mathematics in early years settings.

It is important that the experience of *Let's Count Online* is strongly aligned with the theoretical underpinnings of *Let's Count*, early childhood approaches to learning and teaching, including those espoused by the *Early Years Learning Framework for Australia* (Department of Education, Employment and Workplace Relations [DEEWR], 2009), and reform approaches to mathematics education. The findings suggest that this is mostly, but not always true, of *Let's Count Online*.

A key focus of *Let's Count* is engagement between educators and family members centred on children's mathematics learning. In the T2 survey, *Let's Count Online* participants rated their engagement with a set of teacher practices before and after Let's Count Online. They reported lower levels of *'talking about children's mathematics learning with family members'* or *'building on the mathematics that family members tell them children are using at home'* prior to the program, (means of 4.4 and 4.1 out of 10 respectively). The mean rating for these practices after *Let's Count Online* was 7.0 and 6.9 respectively. This suggests that the course prompted an increase in both practices, but these activities were less common for some.

Comparison Between Let's Count Online and Face-to-Face

Interview data indicated that there was not as much accountability for participants' engagement and learning in the online course compared with the face-to-face model. This was possibly due to the different level of accountability for the between session tasks embedded in *Let's Count Online*, compared to the *Family Gatherings Report* required of the face-to-face participants. In the face-to-face model, participants presented the outcomes of family engagement strategies to other participants and received feedback and inspiration from the experiences of colleagues, and from the course facilitators. They also discussed their observations of children's mathematics learning during the period between workshops, and had the opportunity for this learning to be extended through the guidance of facilitators. This learning opportunity was not included in the *Let's Count Online* model.

The findings also suggest that there was a lesser understanding of the aims of *Let's Count* developed by *Let's Count Online* participants. Interview data suggested that the course was more likely to reinforce the pedagogical practices that the educators were already using, rather than stimulating new pedagogical practices. Also, the *Let's Count* mantra of *Notice, Explore, and Talk About Mathematics* was less a feature of *Let's Count Online* participants' reflections in the interviews and survey data than for face-to-face participants.

Low Level of Difficulty for Let's Count Online

The findings suggest that the same level of professional and academic rigour may not be afforded by the *Let's Count Online* learning environment compared with the face-to-face workshop environment. This view was reinforced by one participant stating that *Let's Count Online* did not reach the level of challenge he was seeking for his staff, and another who explained that *Let's Count Online* was the sort of course she could complete while watching TV with her family. Perhaps the *online* course is more characterised by passive engagement with the intended learning opportunities than active engagement. Possible strategies to increase the level of difficulty and active engagement for participants may include providing a *Let's Count Online* facilitator who can provide online or real-time feedback, or the opportunity to complete the course in workplace groups to promote discussion and feedback.

Conclusion and Recommendations

Overall, the findings from the *Let's Count Online* evaluation suggest that the e-learning platform was successful for delivering professional learning for educators associated with the *Let's Count* program. The participants in the evaluation were very positive about *Let's Count Online*, and many appreciated the chance to access the professional learning when opportunities for the face-to-face workshops were not available in their region. However, some educators endured technical issues and a lack of online support for rectifying these. There were some important differences noted when comparing the *Let's Count Online* professional learning model with the face-to-face model. For example, the reported low level of difficulty, passive engagement and lack of accountability for learning reported by some *Let's Count Online* participants suggests that the *Let's Count Online* course may benefit from some further development.

The following recommendations provide direction for how *Let's Count Online* may be refined and strengthened to better assist educators meet the aims of *Let's Count*.

1. Develop opportunities for feedback associated with the learning activities embedded in *Let's Count Online*. This may include a facilitator to provide online or real-time feedback, or the opportunity for participants to complete the course in groups within a workplace or early years setting, with a leader in each setting to facilitate discussion about the professional learning, and monitor and support engagements with parents, and observations about children's mathematics use, language and learning.
2. Review the *Let's Count Online* content and materials to identify and alleviate any dissonance with the theoretical underpinnings of *Let's Count*.
3. Ensure that any refinement of the *Let's Count Online* course includes:
   a. Sustained emphasis on the *Let's Count* mantra – notice, explore and talk about mathematics in everyday contexts.
   b. Strategies to sustain educator/parent communication across an entire year of implementation.
   c. A prominent, actively monitored help-line, including email and phone support.

References

Department of Education, Employment and Workplace Relations (DEEWR) (2009). Early Years Learning Framework for Australia. https://docs.education.gov.au/node/2632

Gervasoni, A., & Perry, B. (2015a). *Let's Count Longitudinal Evaluation Unpublished Final Report 2015*. Melbourne: Monash University.

Gervasoni, A., & Perry, B. (2015b). Children's mathematical knowledge prior to starting school and implications for transition. In B. Perry, A. MacDonald, & A. Gervasoni, *Mathematics and transition to school - International perspectives* (pp. 47-64). Dordrecht, The Netherlands: Springer.

Gervasoni, A. & Perry, B. (2017). Notice, explore, and talk about mathematics: Making a positive difference for preschool children, families, and educators in Australian communities that experience multiple disadvantages. In J. Sarama, D. H. Clements, C. Germeroth, & C. Day-Hess (Eds.). *The development of early childhood mathematics education*, Vol 53, pp. 169-225). ACDB, UK: Academic Press.

Moss, P. (2013). The relationship between early childhood and compulsory education: A proper political question. In P. Moss (Ed.), *Early childhood and compulsory education: Reconceptualising the relationship,* pp. 2-49. London: Routledge.

Perry, B., Gervasoni, A., Hampshire, A., & O'Neill, W. (2016). *Let's Count*: Improving community approaches to early years mathematics learning, teaching and dispositions through noticing, exploring and talking about mathematics. In B. White, M. Chinnappan, & S. Trenholm, (Eds.). *Opening up mathematics education research (Proceedings of the 39th annual conference of the Mathematics Education Research Group of Australasia)* (pp. 75–84). Adelaide: MERGA.