Evaluation of the Victorian Deaf Education Institute Real-Time Captioning Pilot Program 2013

Executive Summary

Report prepared for: The Victorian Deaf Education Institute

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This evaluation report presents the findings of the evaluation of the implementation of the Real-Time Captioning program in 2013. The aim of this evaluation study was to build on the previous evaluation study (Clinton, Brown & Cairns, 2013) and evaluate the program’s ongoing impact on academic and participatory outcomes for students.

This executive summary will provide an overview of the key findings from the evaluation as they relate to the implementation process and outcomes of the program in 2013. It draws on the data from across various data collection methods to describe the implementation process and the impact of this technology for students and the school community more broadly. Finally, some summative conclusions and recommendations are presented.

EVALUATION METHODOLOGY

A mixed-methods methodology was utilised to guide data collection and analysis. The evaluation methods included a school data audit, student survey, student language and literacy assessment, student case studies, teacher survey, analysis of transcripts and interviews with program staff. Further methodological details are provided in the Methodology Section and in Appendix F in Supporting Document 1: Data Collection Procedures and Protocols.

KEY EVALUATION FINDINGS

This section summarises the key findings of the evaluation in two parts: first, those that relate to the implementation process and secondly, those that relate to the program’s impacts.

IMPLEMENTATION PROCESS OF THE REAL TIME CAPTIONING PROGRAM

Overall, all stakeholders of the program (students, teachers, coordinators and program personnel) appeared satisfied with the implementation of the program and the level of support that they received. Stakeholders reported that with each iteration of the program, there have been improvements in the experience for schools and students.

Changes to the Implementation of the Program in 2013

In 2013 there were several adaptations to the implementation process for the program. These included a change to the audio solution underpinning the intervention, the process of booking captioning and the strengthening of the provision of on-site technical support via school technicians. Overall, it appears that this new process of delivering captioning is now working effectively, is comparable in terms of the quality of service delivery and may have some benefits in terms of efficiency.

Enablers and Barriers to Successful Implementation

Enablers to the successful implementation of the Real-Time Captioning program include the attitudes of the students and teachers involved professional development and induction for stakeholders, the extent to which the technology fits seamlessly and comfortably within the classroom and coordination within the schools. Barriers to successful implementation primarily related to a lack of buy-in and engagement from key stakeholders and technological barriers, such as difficulties in connecting the devices and poor audio quality.

Degree of Implementation in 2013
Overall, there has been a fairly high level of program fidelity, with adaptations to the program seeming to enhance the implementation process. The program was designed in 2013 such that the majority of students received a measured dosage of 160 hours per year, corresponding to two subjects. However there was clear variation across sites and individuals in the ways in which they used captioning and transcripts. For example, some students just accessed captions in their allocated subjects, while others supplemented their learning in class by reviewing the transcripts from captioned lessons, either independently or with a teacher of the deaf. Likewise some teachers were highly proactive in using the transcripts to support their students’ learning and reflect on their own teaching practice, whilst others did not engage beyond having their lessons captioned. Instructing teachers, students and teachers of the deaf as to the myriad ways they can use the captioning and transcripts to support their learning and development may be useful, to ensure the system is used to optimal effect.

OUTCOMES OF THE REAL TIME CAPTIONING PROGRAM

A major imperative for this evaluation was to build on the evidence collected to date around the impact of real-time captioning for students, teachers and the wider school community. This section summarises these impacts based on the evaluation data collected in 2013. This is followed by a discussion of student- and school-level characteristics that can affect engagement with the program and thus mediate the effectiveness of real-time captioning.

Student Outcomes

The main outcomes examined in this evaluation were: student access to and comprehension of curriculum material; language and literacy; and psychosocial and participatory outcomes. There was variation across the students in the impacts they derived from their involvement with the program, but overall the findings suggest that for those students who engaged with the program, captioning was effective in supporting their comprehension, engagement with learning and inclusion within the classroom. Coordinators, teachers and students reported some improvement in their understanding, skills and completion of work. Students, on average, demonstrated an increase in reading comprehension scores that was slightly more than would be expected with the passage of time, particularly in passage comprehension. However, these shifts are difficult to attribute to the intervention.

Students, teachers and coordinators felt that captioning has impacted positively on students’ engagement and motivation to learn. Improvements were also observed in students’ interactions within the classroom, specifically in classroom confidence and the level of participation and engagement in class discussions. Students felt that they understood their teacher and classmates better in classes with captioning and felt more positive about their classroom communication in classes with captioning.

Teacher Outcomes

Overall, teachers have been satisfied with their involvement in the program and their response to captioning was positive and saw many advantages of the technology for teachers, the deaf/hard of hearing student and their hearing peers. Teachers feel that it meets a previously unmet support need for them in teaching students with a hearing impairment. As a consequence, they felt more confident in teaching these students; for example some teachers talked about having increased their awareness of these students’ needs in relation to their communication in the classroom. Provision of additional training and support to teachers around effective pedagogy for real-time captioning would be beneficial. In particular, there is a need to educate teachers with regards repeating or summarising students’ questions or comments more frequently.

Home/Parent Outcomes
In general, students reported finding the transcripts useful for their learning, in helping to cement classroom learning and clarify concepts either through independent study, or via review of the transcripts with others. The stakeholders felt that real-time captioning could also provide a valuable means for parents to increase their awareness of their child’s progress at school and to engage with their learning; however there is little evidence to suggest that this had occurred. Some stakeholders suggested that implementing real-time captioning earlier (for example at the start of high school) may result in a greater level of parent involvement. Parents may also require instruction and support around how they can support their child’s learning through review of transcripts.

**Student- and School-Level Characteristics that Predict Engagement with the Program**

A focus of the evaluation in 2013 was identifying factors that predict differential impact of captioning for different students. The factors that emerged in the synthesis of evaluation findings clustered into two categories: student characteristics and school characteristics.

Student-level factors included: literacy level and language skills; identified communication modality; level of hearing loss; engagement in learning; motivation and self-regulation; study habits; age and maturity; cognisance of missed information and self-advocacy skills; cultural identity; and social connectedness. School-level success factors included: coordination; teacher attitudes and buy-in; availability of other support services; the timing of captioning provision; the subjects in which captioning is available; and technical infrastructure and support.

These findings can be used to support a comprehensive needs assessment in the first instance to determine whether captioning and transcripts are likely to be effective for the unique students, teachers and schools. These factors also highlight the kinds of information that should be communicated to schools to prepare them to use captioning services optimally. Further investigation of the characteristics of students who most benefit from captioning is warranted in future research and evaluation studies to confirm and extend these findings.

**CONCLUSIONS AND RECOMMENDATIONS**

The findings of this evaluation add to those from the prior report (Clinton, Cairns & Brown, 2013), in providing insight into the implementation of the program, the impact of the program to date in terms of academic and participatory outcomes for students and factors that may mediate these outcomes. The combined evidence from these evaluations provides a strong foundation on which to base further research and evaluation into the use of real-time captioning in deaf/hard of hearing and other populations. It also provides evidence to guide the continuing development and improvement of the service.

The goal of the Real-Time Captioning program is to complement and extend the wider suite of resources and support services available to support deaf/hard of hearing students’ access to and comprehension of curriculum material. It is not seen as a panacea or a replacement for any other service and it is not intended as a ‘one-size-fits-all’ intervention. The evaluation evidence collected confirms the previous report’s finding that, in this capacity, the intervention is acceptable to and moreover embraced, by the vast majority of participating students and teachers.

For some students, it appears that real-time captioning has the potential to facilitate a higher level of engagement in learning by increasing their opportunity to learn. This may occur as a result of the system facilitating access to instruction and classroom discourse, which may in turn serve to increase student motivation, facilitate interactions with hearing peers and support participation in classroom discussion. Based on this evidence, real-time captioning can be seen as a potentially valuable tool to support the curricular and social inclusion of deaf/hard of hearing students within mainstream education settings.
Based on the evidence collected under the evaluation to date, there are some areas in which the implementation process could be adapted further to continue to improve the implementation and impact of the program. These are identified in the set of recommendations below.

**RECOMMENDATIONS**

Based on the findings from the evaluation, the following recommendations for the program are put forward for consideration.

- Consider ways to optimise orientation and training procedures:
  - For schools
    - Reconsider timing of training of teachers, coordinators and technicians.
  - For teachers
    - Ongoing investment in professional learning for teachers using real-time captioning.
    - Webinars for top-up support/trouble-shooting.
    - More explicit direction around effective use or pedagogy of real-time captioning and specifically the value of the transcripts as a teaching tool.
  - For teachers of the deaf
    - Teachers of the deaf should emphasize the importance of classroom teachers restating students’ answers or discussions as a regular practice, as the transcript analysis suggests this is not happening in classrooms currently.
    - Emphasize the value of Teachers of the deaf reviewing classroom transcripts with deaf/hard of hearing students after class to revise concepts and vocabulary.
  - For students
    - Develop a more formal student induction package.
  - For parents
    - Consider ways to foster parent engagement with the program through an orientation or information session.
- Schools conduct an exhaustive needs analysis prior to offering captioning:
  - For schools
    - Investigate whether there is sufficient resource and support to coordinate captioning and if there is a perceived need for real-time captioning given alternative support services available.
  - For teachers
    - Investigate whether there are barriers relating to buy-in, attitudes, technical literacy, or other teacher-related factors that may be that may impede captioning effectiveness, as highlighted in this report.
  - For students
    - Discuss with the individual students their needs and learning support preferences, as well as the additional student-level characteristics that predict engagement, as highlighted in this report.
- Schools consider the timing of implementation.
- Schools build the capacity of technicians to allow for efficient and effective set-up of the program and trouble-shooting.