# Developing and delivering an online course for teachers to support the effective teaching of literacy through braille

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**Introduction**

This paper describes the development and implementation of an online second level training programme for qualified teachers of children with vision impairment (QTVIs) by the Royal National Institute of Blind People (RNIB) in the UK. The programme was developed to meet the needs of QTVIs working with braille users in mainstream schools by addressing national concerns about the quality of the teaching of literacy through braille. The programme is delivered through Moodle and comprises interactive study materials, video and online discussion. It was piloted and evaluated by a group of 16 QTVIs between December 2014 and March 2015 with very positive feedback. Following revision the course was re-launched in October 2015 with another 16 students. The paper describes how the elements of the programme content were identified, the process of the programme design, development and implementation and the results of the evaluation. Key themes and content from the programme are explored along with a discussion of the applicability of the programme to an international audience.

**Background**

There are an estimated 21,700 children and young people under 17 years old with a vision impairment of sufficient severity to require specialist support in England. Approximately two thirds of these are educated in mainstream schools, some of which are additionally resourced for learners with vision impairment. Around one third attend special schools for learners with learning or physical disabilities. Only two per cent attend specialist schools designated for blind and partially sighted learners. Around 5 per cent of children and young people with vision impairment in England use braille as their sole or main literacy format (Keil, 2012).

From these population figures it will be clear that there are only around 1000 children and young people who read braille in England. This means that many QTVIs have little experience of, or opportunity for, teaching literacy through braille. Although learning the braille code itself is a required element of QTVI training, there is less emphasis on learning how to teach it to children because the breadth of content to be covered in the course means there is limited time to consider such issues in depth. In addition, for many teachers their QTVI training may have happened many years ago and their specific knowledge and skills in how to teach braille may have been largely forgotten through lack of use. The resulting pattern of expertise is therefore very patchy. Some local authority services have ‘braille experts’ who are assigned to particular children, but even so experience is often variable in the service as a whole and in some small services virtually non-existent.

This difficulty was identified in the 2012 literature review and the following recommendation made:

“Appropriate and timely professional training is required for those teaching children literacy though braille. Example developments to existing training might include:

* The review and possible revision of approaches in existing training programmes in relation to teaching literacy through braille;
* The creation of additional credit bearing and non-credit bearing courses for teachers and teaching assistants in this area;
* Second level training for QTVIs;
* Interactive resources and guidance at a publically available location such as a web portal.”

**Course development**

In 2013 RNIB received £100,000 government funding through the National Sensory Impairment Partnership (NatSIP) to develop an online course in teaching literacy through braille. It was decided to base the overall design on ‘Partners in Learning’, an existing Moodle course for teaching assistants developed by RNIB in conjunction with the Open University. This course includes a strong focus on interactive self study, group discussions and reflective assignments and has run very successfully since 2008. Our experience with ‘Partners in Learning’ also meant that we were aware of the main accessibility limitations with the Moodle platform and had developed proven strategies for addressing these.

In order to inform the content of the course we consulted with QTVIs through meetings of RNIB’s Braille Network in summer 2013. Our intention was to clarify the content and style of the course, as well as whether local authority services would be willing to pay for it and release staff to take part. The feedback from these meetings was very positive and gave us a framework for our future planning.

Central to the new course would be the specialist nature of its content. We therefore recruited a team of four QTVIs who were known nationally as experts in teaching braille to write the individual units of the course, along with Dr Steve McCall from the University of Birmingham as the lead author and content co-ordinator. We also recruited the instructional designer who had worked on ‘Partners in Learning’ to advise on the structure of the online course and to build the final product.

In designing the course we had to make a number of key decisions:

* Restricted or open target audience. There is an obvious case for saying that anybody with an interest in teaching braille should be able to study the course. However, opening it up to anybody would make it very difficult to target the content appropriately. Our overriding concern was to provide a high level courses for QTVIs themselves, not an awareness course for the wider range of education professionals who work with blind children. We therefore chose to restrict the course to qualified teachers of children with vision impairment so that the course could focus on how to teach braille rather than on the code itself.
* Free versus charged. Although a free resource held obvious attractions in terms of likely take-up, it would also limit greatly the scope of the course because we would have no income to pay tutors and any assessment would have to be automated within the Moodle system. We decided that fees were necessary to ensure the quality of the learning experience and also to secure students’ commitment to completing it.
* Open access versus timetabled. We decided that open access would limit the nature of the learning because students would effectively be studying content on their own. There were clear benefits to getting them to work together during the course, which would only be possible if it operated to a set timetable.
* Core versus optional content. Some teachers had suggested that the course should comprise a series of optional modules and they should be free to choose which of these to study. We decided against this for several reasons. Firstly, we believed that everybody studying the course should cover the same core content so that they were improving their skills to teach braille to a range of children and young people, not just an individual learner. Secondly, allowing too much choice would make it difficult to design meaningful discussion activities which we wished to make a key feature of the course. We decided therefore that most of the course content should be compulsory but that there should be a series of short supplementary units towards the end where students could exercise some choice.
* Short versus long. We estimated the time commitment needed to cover the planned course content to be around 80 hours. This would involve a significant commitment from teachers working full-time but we believed it was reasonable if it was spread over sufficient time. The requirements of the timetable suggested that it would fit into four months, starting in November 2014 and finishing in February 2015.
* External accreditation or internal certificate. While there might be benefits in seeking external accreditation for the course we were also aware that this ran the risk of restricting our options in many other areas, for example the duration and cost of the course as well as the nature and level of its content. We decided therefore not to seek external accreditation and simply to award an RNIB certificate to those completing it, in the hope that most teachers would study it to improve their professional practice and not to further their academic credentials.

**Course content**

Under the overall title ‘Effective teaching of literacy through braille’ we divided the content of the new course into six core units and seven supplementary units as follows:

#### Core units

1. Fundamentals of braille literacy. This unit looks at braille as a literacy medium, key aspects of the code itself and how support for children learning braille is structured.
2. Pre-reading. This unit deals with the stage before formal reading and focuses on the early years prior to entering school.
3. Early reading part 1. This unit introduces reading strategies for children learning literacy through braille. The focus is on formal education in primary school and involving parents.
4. Early reading part 2. This unit looks at issues around the use of uncontracted/contracted braille and the use of reading schemes.
5. Fluent reading. This unit looks at the development of fluency in older braille users.
6. Implementing braille literacy. This unit covers a range of subjects that relate to braille literacy including assessment, using media, writing with braille, the role of teaching assistants along with the use of technology and modifying materials.

#### Supplementary units

Students would also choose two of the following:

* Braille maths
* Braille science
* Foreign language braille
* Braille music
* Late beginners to braille
* Teaching braille to learners with additional needs
* Teaching braille to learners with English as a second language

Each unit would include online self study pages which are designed to introduce key information and ideas about the course content. These would include video content, links to course external reading material (including US websites such as ‘Paths to Literacy’) and a number of interactive activities such as short quizzes and 'drag and drop' exercises to help students check their understanding as they work through the unit. Students would also be prompted at key points to relate the course content to their own experience.

We decided to assess students’ work on each unit in three ways:

* Contextual learning. Each unit would include a structured portfolio which students would complete to demonstrate that they have understood the self study material, applied it to their own context and reflected on its importance in their role. When completed these would serve as a useful record of key course content which students could take back to their workplace for future reference.
* Collaborative learning. Each core unit would contain structured online discussion topics to which students were expected to contribute in discussion groups of 6-7 students. Each student should make an initial posting and then comment on the contributions of other members of the group, thus allowing further development of ideas. There would be no expected ‘correct’ answer to a discussion topic and students’ work would be assessed according to the level and frequency of their contributions to the group.
* Factual learning. Each unit would include a multiple choice quiz which students should complete when they were confident that they knew and understood the self-study material.

**Pilot course**

We recruited 17 QTVIs for the pilot course in November 2014, ranging from teachers who had recently completed their QTVI training to some who had been working in the field for 20 years or more. We organised them in three discussion groups, each led by one of the content authors for the course. One student subsequently left the course without having completed any of the work.

Unlike the ‘Partners in Learning’ course we did not hold a training day at the start, partly to save time and money but also on the assumption that the online guidance would be sufficient for students to make sense of the course requirements. However, as the course unfolded it became clear that the students were struggling to understand how it worked. In particular they did not understand the purpose of an online discussion, holding back from joining in because they thought their contributions would be assessed according to how much knowledge they showed rather than how willing they were to ask each other questions. It took a lot of online support to get the discussion groups back on track and for students to understand the importance of keeping to the timetable for completing them.

A second difficulty was that we had significantly underestimated the amount of work involved in completing the unit portfolios. These included a range of activities including simple note-taking, applied tasks and personal reflection, but we had not differentiated these clearly enough so that students understood which were most important. They were therefore spending the same amount of time on every activity and falling behind the timetable.

In response to these difficulties we revised the portfolios for the later units and clarified what was expected in assessed discussions. We also extended the timetable for the course so that it ended in March rather than February. This resolved most of the problems and all 16 students completed the course successfully.

The pilot course included a final evaluation where we were able to judge how well it had met its aims. The following were the main findings, with each statement rated out of 5:

Positive statements:

* The units were relevant to students’ professional needs: 4.81
* The self-study material was relevant: 4.5
* The discussion tasks were relevant: 4.1
* The portfolio tasks were relevant: 4.0
* The unit tests reflected the content of the unit materials: 4.1
* The study of these units will improve my working practice: 4.8
* I feel more confident about teaching literacy through braille: 4.7
* I would recommend this course to other QTVIs: 4.9

Negative statements:

* The time was reasonable for the amount of content: 2.94

Individual comments included the following:

“Altogether I thought it was a great course, I have really enjoyed doing it and feel it has been very beneficial for my work and my confidence working with and promoting braille”.

“I have found this course to be both enjoyable and instructive. I liked the way it combined reading, discussion, portfolio and test and a complete absence of long essays!

“I feel every QTVI teaching educationally blind children should complete the course as the reading materials, discussions and tasks were so relevant to teaching literacy through braille in inclusive mainstream schools. I think this it is one of the most beneficial VI courses I have ever done since the QTVI course.”

“I think this is a good course. I know that I have had issues with aspects of it, especially the time. I would like all my team eventually to undertake this training but I would hope that the time scale would be different. It was great!”

**Revising the course**

The evaluation of the pilot course proved that we were definitely on the right track in terms of overall approach and content, but needed to fine tune it in order to make it more manageable for students. We therefore made a number of changes before running the course again. The most important of these was to revise the unit portfolios to improve their focus and reduce students’ workload. The new portfolios are therefore organised into three sections as follows:

* Activities and personal notes, where students make notes suggested from the self-study materials and add their own personal notes to keep for future reference.
* Applied tasks, where they respond to particular tasks as directed in the self-study.
* Reflection, where they reflect on key learning points from the unit and discuss how these are relevant to their current and future roles.

We also added a training day added at the start of the course to avoid the confusion experienced by many students in the early stages of the pilot. This would provide an opportunity to demonstrate the online course and to explain how it worked. It would also allow students to meet each other and hopefully to feel more comfortable in sharing their experiences and ideas with each other in the group discussions.

A third change was to re-sequence the timetable over five rather than four months to spread the workload, so that the course would start at the start of November 2015 and finish at the end of March 2016.

We advertised the course again in summer 2015 and recruited another 16 QTVIs, two of whom have since dropped out for personal reasons. The remaining 14 students are all working well and have managed to keep up to date with the timetable. We only carry out a full evaluation at the end of the course so it is too early to know for certain how useful the students are finding it. However, their discussions include regular comments such as “I have enjoyed taking part in our discussions and feel that I am learning a lot from you all”. There are still some negative comments about the workload but these are fewer and less vocal than in the pilot course.

One spin-off benefit of the course is that we have extracted core content from the self studies and reading materials and embedded them in the QTVI training course at the University of Birmingham. This means that all new QTVIs now have some exposure to the course materials in their initial training, helping to address some of the concerns identified in the 2012 literature review. There is a danger that giving all trainee QTVIs access to some of the materials will limit the numbers who chose to go on and study the separate online course, but it is important to ensure that all QTVIs have a better grounding in braille literacy and we hope that experiencing this taster as part of their wider training will ultimately generate more interest in studying the full course at a later date.

**Relevance to international audiences**

RNIB is not aware of a similar online course which provides comprehensive coverage of the key knowledge, understanding and skills required to teach literacy through braille to children and young people. While the course draws on a range of existing and publicly available internet resources, it provides a uniquely structured environment for students to learn about these, apply them to their own contexts, discuss them with fellow practitioners and gain recognition and credit for doing so. The course is written in English and is therefore immediately accessible across the English speaking world. We therefore think that teachers of children and young people with vision impairment in other countries may be interested in finding out more about it.

There are several options which we would be willing to discuss:

* The first would be for international students to enrol directly on the UK course on an individual basis. This would be the simplest way for overseas students to access the course and they would potentially benefit from discussing the content with QTVIs in the UK. However, it would also require them to study according to the UK timetable and they might find some aspects of the course (eg national policies and curriculum frameworks) not suited to their own context.
* A second option would be for an organisation to customise the course to suit the needs of teachers of children with vision impairment in their country and to deliver it locally using the existing Moodle platform. This could be done through a licensing arrangement.
* A third option would be simply to use RNIB’s course as a model and to develop a local version of it independently and on a different platform. We are willing to discuss ways of providing other organisations with temporary access to the course to make this possible.

**Conclusion**

We believe that our course ‘Effective teaching of literacy through braille’ represents an important new resource which will support high quality teaching of braille to many children and young people in future. The whole point of good online training is that it is engaging and interactive in ways in which a formal presentation like this cannot be. We would therefore be happy to talk directly to anyone who is interested in finding out more about it, in order to share the course itself and our experience of developing it more widely.

References:

McCall S, Douglas G, McLinden M (2012). A review of the literature into effective practice in teaching literacy through Braille. London, RNIB

Keil S (2012) RNIB survey of VI services in England and Wales 2012: Report for England. RNIB