

**Faculty of Business, Law and Social Sciences**

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| **Proposed Title:**  Investigating the potential of rhythmic-based training in the early years |
| **School:**  Department of Psychology, School of Social Sciences |
| **Proposed Supervisory Team:**  Dr Emily Harrison  Dr Katerina Kantartzis  Professor John Clibbens |
| **Abstract:**  Recent literature supports the relationship between rhythmic sensitivity and literacy skills, including phonological awareness, reading acquisition, comprehension, and reading difficulties. The effectiveness of rhythmic-based training programmes for improving literacy skills in struggling readers has recently been explored (see Thomson, Leong & Goswami, 2013; Bhide, Power & Goswami, 2013), concluding that rhythmic-based training resulted in equivalent gains in reading to a traditional phonological approach. Harrison, Wood, Holliman and Vousden (in preparation), also showed that training both 4-year-old beginning readers and 7-year-old struggling readers on rhythmic-based activities resulted in significantly greater gains in reading than a control. However, to date there are no studies which train rhythmic skills before the onset of formal reading tuition.  In study 1, a rhythmic training programme will be administered to participating nursery children. The programme will aim to train children on rhythmic skills through the use of tapping/clapping exercises, onset-rime tasks, same-different judgement tasks, rhythm copying, etc. It is expected that this will benefit children’s later reading development, compared to children in control school(s). In study 2, two training programmes will be administered: a rhythmic-based programme and a phonological programme, similar to that which reception children currently receive in class. By training these children early, it is expected that all children will benefit in terms of their gains in reading skills. All participating children will receive both interventions over two intervention periods. In intervention period 1, group A will receive the rhythmic intervention, and group B will receive the phonic intervention. In period 2, group A will then receive the phonic intervention and group B will then receive the rhythmic intervention. Through this, the study aims to determine whether training children on rhythmic-skills first can have a positive effect on the acquisition and development of reading skills compared to children who receive the phonic-based training first.  By implementing these methods we hope to provide answers to the following questions:  1) Is rhythmic-based training effective in the early years?  2) Does rhythmic-based training result in a significant gain in reading skills in pre-school?  3) Does training children on rhythmic skills followed by phonics training have a bigger impact on reading skills than training on rhythmic skills after the onset of phonics tuition?  4) Does training children on rhythmic-based activities before the onset of formal literacy tuition have a benefit to their later reading skills?  It is anticipated that all children will benefit from the training involved in these studies. We expect to see that children who receive the rhythmic training in the first study will be more equipped to respond to phonics tuition in reception classes and that these children will therefore make accelerated progress in reading compared to children in the control schools. In study 2, we anticipate that the children who receive the speech rhythm training first will make greater gains in reading skills than children who receive the phonics training first. |
| **Research Environment:**  Birmingham City University has invested massively in research by moving the Department of Psychology into a new building, with newly equipped laboratories for experiments.  The department is equipped with state of the art eye-tracking, electroencephalogram (EEG)  and further equipment and is further investing in obtaining transcranial direct –current stimulation (tDCS) and Biopac equipment. The PhD student on this project will benefit from close interactions with another 10 PhD students in Psychology. The Department of Psychology holds regular seminars and research cluster meetings that the PhD student can participate and benefit from interaction of research ideas. |
| **Applicant Requirements:**  The candidate should have an appropriate first degree in Psychology or another related discipline. A Master’s degree would also be beneficial but is not essential depending on experience. The candidate should be confident in using SPSS for quantitative data analysis, and statistical competence is essential. The candidate should have experience in working with young children, ideally experience of working in a school and/or nursery setting and communicating with teachers. Knowledge of the relationship between prosody/speech rhythm and reading would be beneficial, and previous engagement in research in this area would also be advantageous. Any experience of teaching in higher education would be beneficial for planned teaching contributions, but not essential for the PhD applicant. Note that a full DBS check will also be required. |
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