This study explores the potential added value of interactive digital technology to early-years music education through the development of software artefacts and their application in the primary classroom. The aims of the study are to investigate and identify new designs and approaches for classroom music-making with technology, to integrate educational theory and software development in this field, and to promote musical creativities at the individual and social level. Following a constructivist-interpretivist approach, a range of qualitative methods are applied in the pursuit of these goals. The emerging educational methodology of Software Design as Research (SoDaR) is combined with an emergent model of Grounded Theory, adapting a new methodological approach for the unique purposes of this project, as well as examining how this model could be applied to similar projects.

Findings can be summarised as follows:

- i. Rudimentary and familiar actions can be harnessed, through digital interfaces, as a means of affording creative expression in novice musicians
- ii. Meaning-making structures are as vital as music-making structures in such activities, allowing creative ownership and communication to emerge through basic narrative elements
- iii. Through this process of interactive and representational engagement, digitallysupported environments can allow learners to construct musical concepts for themselves, at the individual and social level.

This research has implications for music education: Appropriate digital technologies and approaches can support the process of musical learning in social settings. Furthermore, such technologies, and the framework for their use in the classroom, can be developed through a process grounded in empirical educational research. Closer working links between educational practice and research, and the development and testing of digital resources, are recommended to ensure that a meaningful and active music education, and the valuable opportunities for personal, social and creative development and expression that this affords, is available and accessible for all learners.