Introduction
Recently, literature has emerged that focuses on ethical considerations in educational neuroscience (Sheridan, Zinchenko, & Gardner, in press; Stein, della Chiesa, Hinton, & Fischer, in press). Through this poster, we hope to contribute to and promote the discussion of ethics in educational neuroscience and Mind, Brain, and Education (MBE). We present a synthesis of neuroethics concepts and explore the relationship between these concepts and recent empirical MBE research.

Methods
A survey of the neuroethics literature provided a set of neuroethics concepts for consideration (see Table 1). Neuroethics concepts that may be particularly important to MBE research are in bold. A second review of literature was undertaken in order to find examples of recent MBE neuroscience research. The following specifications were used:

- Work must be empirically based; work must be published in 2009 or later, and work must be relevant to the field of MBE.
- For our purposes, research relevant to MBE was defined as research that clearly investigated education-related topics (e.g., reading, number sense, children's emotions) using cognitive neuroscience methods. These studies did not need to be classroom-based or use children as participants. With these requirements, ten exemplar studies were selected. Each exemplar empirical study was investigated through the lens of the relevant neuroethics concepts outlined in Table 1.

Results
All ten articles examined, three articles (Kyle & Harris, 2010; Thaler et al. 2009; Fischer, Mills, & Shaki, 2009) did not have apparent neuroethical considerations. In the remaining seven articles, a subset of neuroethical concepts were applicable, indicating these concepts may be especially significant when designing and doing MBE research. Additionally, we found that some articles explicitly discussed ethical implications of their work (for results, see Figure 1).

Figure 1. Results of our analysis, showing neuroethics concepts, examples, and relevant empirical MBE research

Discussion
As research in mind, brain, and education continues to burgeon, the ethical consequences of such research require attention. Distilling relevant concepts from neuroethics can provide a useful starting point for developing the ethical considerations of mind, brain, and education work.

Conclusion
As research in mind, brain, and education continues to burgeon, the ethical consequences of such research require attention. Distilling relevant concepts from neuroethics can provide a useful starting point for developing the ethical considerations of mind, brain, and education work.

References

Table 1. Classification of neuroethics concepts and examples from the literature. Ethical concepts that may play a role in educational neuroscience work are in bold.