Abstract: There is a growing interest in children's sensitivity to orthographic constraints governing well-formed letter sequences. A few studies have shown that young spellers sometimes rely on untaught graphotactic conventions for permissible letter positions and letter contexts and have postulated that distributional statistical learning processes may underlie graphotactic sensitivity. However, there are no studies investigating whether similar patterns can be learnt incidentally under brief experimental conditions. In this talk, I will present data from a study inducing learning of novel graphotactic constraints in 7.5 year-old children and adults. It will be argued that statistical learning processes that have been previously implicated in several linguistic domains come similarly into play in the orthographic knowledge acquisition process. Ongoing studies in our lab investigating learning of CV (body) vs. VC (rime) context-based patterns following training over 2 consecutive days will be also discussed.