

How does the provision of semantic information influence the lexicalization of new spoken words?

An important aspect of acquiring new words is their integration with existing vocabulary knowledge. The integration of a new word with existing lexical items does not occur immediately after learning, but often requires a period of offline memory consolidation. Whilst the integration of a new spoken word can occur within twenty-four hours of learning its phonological form, previous studies have reported that this lexical integration can be delayed if semantic information is provided during learning. One possibility is that this delay results from reduced phonological processing during learning as a consequence of the need to learn the semantic associations. The current study thus re-examined the influence of semantic exposure on the lexical integration time-course of new spoken words in adults, by equating the task goals for learning new spoken words with and without semantic information. Participants learnt novel words via a phonological training task, in which the words were associated with a picture referent (picture-present condition) or learnt as phonological forms only (form-only condition). Critically, participants were instructed to learn the forms of the novel words, with no goal to learn the word–picture associations. Following training, tests of lexical integration, declarative memory, shadowing, and picture association memory were administered immediately after learning, after 24 hours of consolidation, and after one week of consolidation. Lexical competition effects emerged after one week of consolidation for both the picture-present and form-only words, indicating an equivalent lexical integration time-course. Correlational analyses suggested that larger lexical competition effects at the one week test were tied to stronger declarative memory of the new words at initial learning. Finally, the tests of declarative memory and shadowing showed equivalent performance for picture-present and form-only words, despite participants showing good knowledge of the picture associations immediately after learning. These data suggest that the provision of semantic information does not slow the time-course of lexical integration, provided that phonological information is recruited sufficiently well during training. Further, these data align with recent reports suggesting that the strength and type of initial learning influence the lexical integration process.

Primary author: Dr HAWKINS, Erin (MRC Cognition and Brain Sciences Unit, Cambridge, U.K.)

Co-author: Prof. RASTLE, Kathy (Department of Psychology, Royal Holloway University of London, U.K.)

Presenter: Dr HAWKINS, Erin (MRC Cognition and Brain Sciences Unit, Cambridge, U.K.)