RAN is a consistent predictor of reading fluency across languages and ages

by Judith Belkin, MOT, OTR/L, c-SIPT

Reading is a complex task. Much research is being done to understand what makes a good reader, and what factors cause reading to be a difficult skill for some to acquire. Of great importance to parents, educators, and researchers alike is the question of what tools do we have to predict reading ability in beginning readers. How can we identify the specific problem or problems that make reading difficult for a child, or an adult, to acquire? One of the important predictors of reading skills is rapid automatic naming (RAN) of a series of printed letters, numbers, colors, or objects. Examining rapid automatic naming skills across the age spectrum can help us better understand reading acquisition, reading deficits, and remediation at different ages. Similarly, understanding how rapid automatic naming predicts reading skills in a variety of languages, and not just English, can help us understand which reading components are specific to one language and which are universal to all languages. Some patterns are emerging from the research being done in these two areas.

Rapid automatic naming is proving to be valuable as a predictor of reading skills across the age spectrum. It appears to be a good indicator of later dyslexia in children as young as age three and a half, according to one longitudinal study in Finland. In another study, it appears to be a good predictor in kindergarten of timed reading skills later on in second grade. Research shows that RAN is also a strong indicator in second and third grade of later fifth and eighth grade reading skills, but only with poor readers, not typical readers. RAN scores continue to correlate with reading skills in young adulthood and beyond.

The relationship of rapid automatic naming to reading fluency is also being examined and compared in a number of languages. Languages can be sorted into those that are more consistent, or regular, in the associations between their sounds and their written symbols (orthography), and those which are less consistent. Some languages, such as Spanish, Greek, and Finnish, are highly regular in the associations between their sounds and their written symbols (sound-symbol correspondences), and have consistent, regular spelling. They are also described as having a transparent orthography. Other languages have complex, confusing, and ambiguous sound-symbol associations. These inconsistent languages are referred to as deep orthographies and include English and Danish. Still other languages, such as Chinese, are referred to as logographic because the characters represent words or parts of words rather than sound units.

Rapid automatic naming appears to tap into fundamental processes for reading fluency not just with English, but across languages. Conversely, it is not a good predictor of reading accuracy across languages. Research also indicates that the importance of rapid automatic naming in relation to reading fluency skills shifts and intensifies as the acquisition of basic decoding skills gives way to the development of reading fluency. The age this occurs varies depending on how simple or complex the sound-written symbol associations are in a specific language (its level of orthographic simplicity or complexity). The relationship and importance of rapid automatic naming to reading fluency becomes more important with children who are older in those languages which have few clues to pronunciation in their written symbols (i.e., are more opaque), and therefore require more time for a child to development basic phonological awareness (PA) and decoding skills.
When examining and comparing rapid automatic naming in languages with differing sound-symbol consistency, it is also important to break down and examine RAN according to its component parts. These parts include an articulation time, or the time it takes to say the names of the symbols, and a pause time, or the time between naming two adjacent symbols. In one study, for example, pause time by itself was not a significant component to reading variability in Greek although the articulation time by itself was. In Chinese, however, pause time WAS more important to reading outcomes than articulation time, and important to both reading accuracy and fluency. Some discrepancies in research findings could be attributable to differences in whether researchers break down rapid automatic naming into its component parts when analyzing the data. RAN is also tested using different categories, including objects, pictures, colors, letters, or digits, and this needs to be taken into account when analyzing the data (see below).

Research studies continue to explore the relationship of rapid automatic naming, or RAN, to reading acquisition and reading deficits across a wide range of languages and ages, particularly in terms of reading fluency skills. In this manner, we are expanding our understanding of the fundamental underlying cognitive processes involved in reading, as well as the shifting nature of these processes across the age spectrum and from one language to another.

References


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