Different kind of models

Table 1. Major computational models of reading organised in terms of their primary focus[a,b]

Model	Style	Task	Phenomena	Large lexicon
Models of visual word recognition				
IA [11,22]	IA	PI	Word-superiority effect	
Multiple read-out [3]	IA	PI, LD	Word-superiority effect	
SCM [2]	IA	LD, MP	Letter order	
BR [4–6]	Math/comp	LD, MP	Word frequency, letter order, RT distribution	√
LTRS [8]	Math/comp	MP, PI	Letter order	
Overlap [66]	Math/comp	PI	Letter order	
Diffusion model [30]	Math/comp	LD	RT distribution, word frequency	
SERIOL [7]	Math/comp	LD, MP	Letter order	
Models of reading aloud				
CDP++ [13]	Localist/symbolic	RA	Reading aloud	√
DRC [12]	IA	RA, LD	Reading aloud	
Triangle [24,25]	Distributed connectionist	RA	Reading aloud	
Sequence encoder [15]	Distributed connectionist	RA	Reading aloud	√
Junction model [50]	Distributed connectionist	RA	Reading aloud	√
Models of eye-movement control in reading				
E-Z reader [17,18]	Symbolic	R	Eye movements	
SWIFT [19]	Symbolic	R	Eye movements	
Model of morphology				
Amorphous discriminative learning [16]	Symbolic network	Self-paced reading, LD	Morphology	√

[a]The table also indicates the modelling style or framework, the main task that the model simulates, the main phenomena that the model simulates (not exhaustive), and whether the model uses a realistically sized lexicon. Note that the review concentrates on 'Models of visual word recognition'.

[b]Abbreviations: Math/comp, mathematical or computational; LD, lexical decision; PI, perceptual identification; RA, reading aloud; MP, masked priming; R, natural reading.

perceptual ID
lexical decision
reading aloud

Norris (2013)

THREE MODELS

PARALLEL DISTRIBUTED PROCESSING (PDP)

DUAL-ROUTE CASCADED (DRC)

CONNECTIONNIST DUAL PROCESS + (CDP+)