1. ICC: category with the largest a parameter, usually monotonically increasing; smallest a parameter, monotonically decreasing; others not monotonic
2. If 2 categories, the model for the 2 responses are the same
3. Item information function: the sum of category information
4. 2PL: performs poorly on participants with extremely low and high thetas
5. Bock-Samejima model in MULTILOG (paper)
6. Simulation:

R package: mcIRT

NRM.sim – simulate function in mcIRT

Pp: person parameters: theta

Parameters: zeta: c parameter; -lambda: a parameter

1. Get the item parameters

Simulate person parameters

Obtain item responses from examinees

1. With item responses, try to obtain parameters

Assign the No. of examinees in each category

Then use NRM function – convergence reached or not? (if can’t be guaranteed, need to double-check data)

Compare the estimated item parameters with the true item parameters assigned to R in (1)

1. Plot

plotINF – information function plot

1. Function: apply: apply the function to each of the theta

Figure out the range of probability

1. Generate u from uniform distribution (0, 1)
2. Call graded response model grm(a(j), b1(j), b2(j), b3(j), b4(j), theta(i), prob)

If u<= prob (1) then res (j) = 0

End if

If prob (1)<=u<=prob(2) then res(j)=1