

Availability Formulas

Designing Collection Experiences: Availability

Ratio of items in use to items in the collection

$$\text{Ratio} = \frac{\text{Items in use}}{\text{Items in the collection}}$$

Ratio of items on the shelf to items in the collection

$$\text{Ratio} = \frac{\text{Items on the shelf}}{\text{Items in the collection}}$$

Availability Survey Ratio

$$\text{Availability} = \frac{\text{Items found}}{\text{Items looked for}}$$

Holdings Ratio

$$\text{Holdings ratio} = \frac{\text{Items in rhizome}}{\text{All items in collection}}$$

Circulation Ratio

$$\text{Circulation ratio} = \frac{\text{Circulation of rhizome}}{\text{All circulation for the collection}}$$

Relative Use

$$\text{Relative use} = \frac{\text{Circulation ratio}}{\text{Holdings ratio}}$$

Brief Test Holdings Availability

$$\text{Brief test availability} = \frac{\text{Items owned}}{\text{Items on scaled list}}$$

Reader-Weighted Availability: shelf sample

$$\text{Reader – weighted availability} = \frac{\text{Specific items on shelf in 2nd sample period}}{\text{Specific items out in 1st sample period}}$$

Turnover

$$\text{Turnover} = \frac{\text{Annual circulations in rhizome}}{\text{Holdings in rhizome}}$$

Mean Annual Days Out

$$\text{Annual days out} = \text{Turnover} \times \text{Days in circulation period}$$

Time on Shelf

$$\text{Time on shelf} = 365 - \text{Annual days out}$$

Mean Time Between Arrivals

$$\text{Time between arrivals} = \frac{\text{Time on shelf}}{\text{Turnover}}$$

Total Demand for a Rhizome (from table at <http://bitly.com/16rbEL2>)

$$\text{Demand for rhizome} = \text{Demand per item from table} \times \text{rhizome holdings}$$

Reader-Weighted Availability (from table at <http://bitly.com/16rbEL2>)

$$\text{Reader – weighted availability} = \frac{\text{Original circulation for rhizome}}{\text{Total demand for rhizome}}$$

Duplication (see full explanation at <http://bitly.com/1676Dot>)

$$\text{Number of copies} = 1 + \frac{\text{Days in loan period} \times \text{Number of circulations}}{\text{Days in circulation life}}$$