

I provide a summary of what I think is one of the most important studies ever done in education. Stanovich and Cunningham (1993) provide a clear answer to the question “Where does knowledge come from?” A lot of it comes from reading.

Stanovich and Cunningham administered a questionnaire and short quizzes to 269 undergraduates in two universities in introductory psychology classes. Their mean reported high school grade point average was 3.4 out of 4 (sd =.44).

Three measures of “General Ability” were used:

Subjects completed a shortened version of (1) the Nelson-Denny reading test (comprehension section only), (2) a subset of items from the Raven Progressive Matrices test, considered a test of analytic intelligence and problem-solving ability, and (3) a mathematics test covering “fractions, decimals, algebraic equations, scientific notation, percentages, ratios and proportions and short story problems” (p 212).

They also completed five tests of “print exposure”:

Author Recognition Test (ART): Subjects were asked to indicate if they were familiar with names of authors by putting a check mark next to the name. Forty actual authors (e.g. Maya Angelou, Isaac Asimov) were included and 40 foils.

Magazine Recognition Test (MRT): Similar to the ART; the 40 magazines included Architectural Digest and Forbes and 12 foils.

Subjects also took two television exposure questionnaires, probing a preference for TV versus other activities, knowledge of programs, and knowledge about top-rated popular shows.

Finally, subjects filled out five “Knowledge Measures”:

- 1. Cultural literacy (CLT) (Science, Social Sciences): 45 items, 40 multiple-choice, 5 true-false questions designed for grades 11 and 12 students. An example of a science question:
“Which of the following concepts is part of Darwin’s theory of evolution?”
And a social science question: Who was the American president who resigned as a result of the Watergate scandal?**
- 2. Practical knowledge: 19 open-ended questions requiring only short answers. E.g. What is the holy book of Islam? Where is the Panama Canal? Covering politics, current events, daily living technology, personal finance, health, religion/language/multicultural knowledge, economics and major 20th century historical events.**
- 3. ACRONYM test, a test of “real world knowledge for productive citizenship in a technological democracy” (215), eg NATO, GNP, PAC,**
- 4. Cultural knowledge (CKC) test: Recognition checklist.– artists, entertainers, scientists, philosophers. 24 names in each category, ½ real, ½ foils.**
- 5. Similar to (4): Multicultural literacy, recognition checklist of people well-known in various fields (216). 30 names (eg Al Capone, Langston Hughes, Margaret Mead, Nelson Mandela) mixed with 15 foils.**

The five Knowledge Measures were combined to form a “General Knowledge Test.”

Table 1 compares the combined impact of reading (print exposure) and other predictors on General Knowledge using multiple regression, which examines the impact of one predictor, unaffected by the relationship among predictors, that is, holding all other predictors constant.

Print exposure was by far the best predictor, far better than high school grades, measures of ability, and familiarity with television programs.

Table 1

Predictor	Beta
High School GPA	0.2
Raven Matrices	0.16
Mathematics	.165 **
Reading Comp	.112 **
Television	-0.039
Print exposure	0.72 **

Table 2 provides more detail, and confirms that print exposure, a reflection of book, newspaper and magazine reading, is the strongest predictor of each of the measures of knowledge. No other predictor came close.

Predictor	CLT	Practical	Acronym	CKC	Multicultural
High School GPA	0.059	0	-0.105	0.072	0.063
Raven Matrices	-0.032	0	0.034	0.055	0.013
Mathematics	.196 **	.234 **	.247 **	0.045	-0.018
Reading Comp	.211**	0.046	0.09	0.08	0.052
Television	-0.038	-0.166	-0.07	0.001	.105 *
Print exposure	0.562**	.536 **	.568 **	.717 **	.686 **

Stanovich and Cunningham’s report, while correlational, provides the strongest evidence possible in favor of reading as a source of knowledge. Clearly, those who read more know more about a wide range of topics. Time spent in book, newspaper and magazine reading is time well spent.

The implications are obvious: We should at least make it possible for young people to read and remove economic barriers (support libraries) and make sure young people have the time to read.

Stanovich, K. and Cunningham, A. 1993. Where does knowledge come from? Specific Associations between print exposure and information acquisition. Journal of Educational Psychology 85, 2: 211-229.