# Assessment of eHealth Literacy Among Health Education Students

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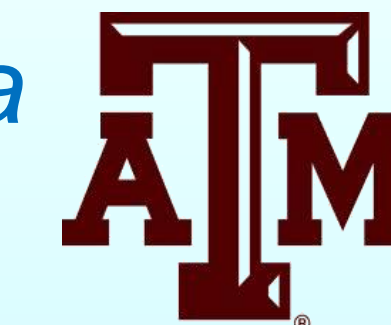
Abstract

Introduction: Researchers have begun to investigate eHealth literacy levels among college students. eHealth literacy refers to the ability of individuals to seek, find, understand, and appraise health information from *electronic resources* and apply such knowledge to addressing or solving a health problem. We believe eHealth literacy represents an important competency area for health education undergraduate students, who are responsible for being able to make use of electronic sources of health information. To date, little research has assessed whether health education students have adequate skills to search for, locate, and/or evaluate eHealth information. **Purpose:** This presentation will highlight selected results from an investigation of perceived and actual eHealth literacy among health education undergraduate majors from a large Southwestern US university. **Methods:** A convenience sample of health education students completed the Research Readiness Self-Assessment–Health (RRSA – h) online assessment. Pearson product moment correlations were used to determine associations between perceived and actual eHealth literacy. A multivariate analysis of variance (MANOVA) was conducted to determine perceived and actual ability to obtain and evaluate eHealth information among different students (IV: Student Classification). **Results:** Seventy-seven (n=77) undergraduate students (88% female) reported actual mean eHealth literacy assessment scores ranging from 39.3% to 50.4% (out of a possible 100%). These low scores were markedly inferior to mean ratings of perceived eHealth literacy, which ranged from 75.3% to 78.5%. Perceived and actual ability to *evaluate* eHealth information was significantly correlated with one another (r=0.26, P=.045); however, perceived and actual ability to *obtain* eHealth information was not. Students of advanced academic status (e.g., Juniors and Seniors) reported higher overall eHealth literacy than their younger counterparts (F(4,140)=2.597, P=.039). **Discussion:** Health education students appear to lack important eHealth literacy skills, especially those students with less academic experience. **Conclusion:** The field of health education would benefit from including more coursework across professional preparatory degree programs to adequately prepare undergraduate students to use eHealth resources. More practice-based curriculum approaches could ensure that all health education undergraduate students are adequately prepared to use the Internet to obtain and evaluate health information.

Methods

RRSA–h Online Assessment
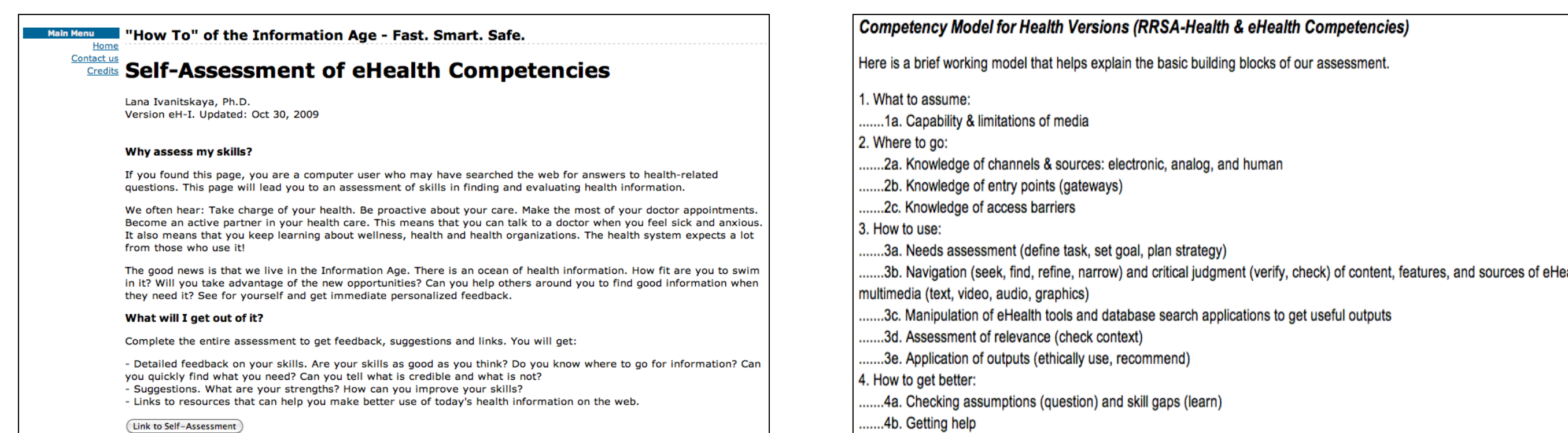
- Independent variable (IV): Student Classification (Levels: Sophomore, Junior, and Senior)
- Dependent variables (DVs): The dependent variables of interest measured by the RRSA-h were: (1) Perceived Ability to Obtain eHealth information (PAO), (2) Perceived Ability to Evaluate eHealth information (PAE), (3) Actual Ability to Obtain eHealth information (AAO), and (4) Actual Ability to Evaluate eHealth information (AAE).
- Data Analysis: Pearson product moment correlations were computed to determine associations between DVs. MANOVA followed by Descriptive Discriminant Analysis (DDA) determined whether differences existed in outcome measures (DVs) based on student academic classification (IV).

Results

Outcome variable descriptive statistics by academic class

Variable	Sophomore (n=12)	Junior (n=24)	Senior (n=41)	Total (n=77)
PAO				
M (%)	7.75 (77.5%)	7.66 (76.6%)	8.03 (80.3%)	7.87 (78.7%)
SD	1.78	1.30	1.34	1.39
PAE				
M (%)	7.72 (77.2%)	7.23 (72.3%)	7.66 (76.6%)	7.53 (75.3%)
SD	1.38	1.41	1.46	1.43
AAO				
M (%)	5.70 (38.0%)	7.79 (51.9%)	7.88 (52.5%)	7.56 (50.4%)
SD	2.26	1.64	2.53	2.34
AAE				
M (%)	7.10 (30.9%)	8.88 (38.6%)	9.61 (41.8%)	9.04 (39.3%)
SD	3.07	2.40	2.92	2.87

Note: (%) indicates the mean percent of the total possible points scored on each subscale
Subscale Measurement Ranges: PAO: 1 to 10; PAE: 1 to 10; AAO: 0 to 16; AAE: 0 to 23

Linear Discriminant Function Plot of Group Centroids

Sophomore (-.91)   Junior (.04)   Senior (.20)
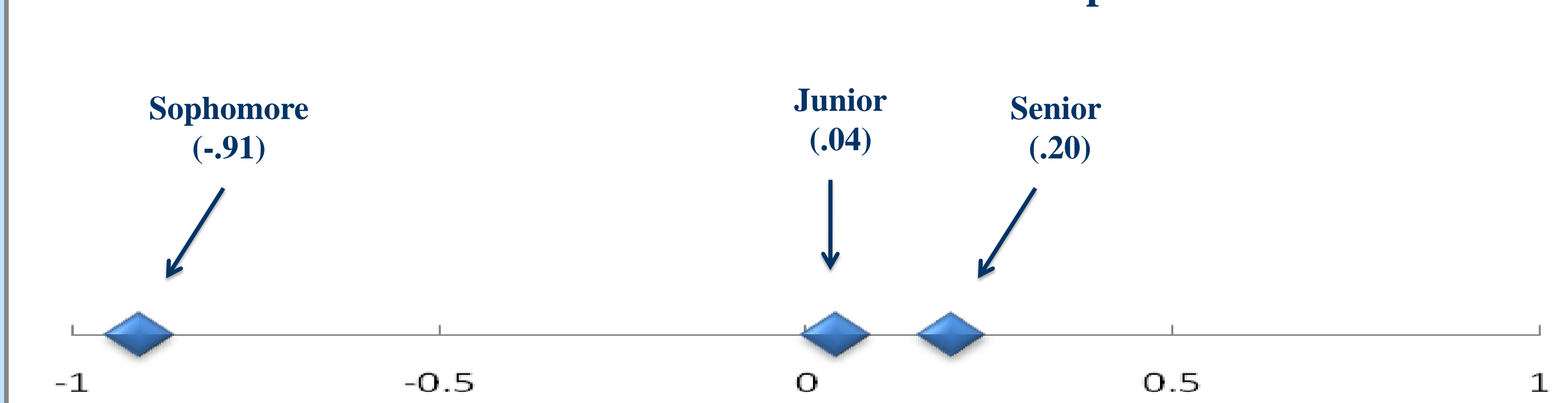
Discussion

- Data from this investigation indicated that the current sample of health education students lacked actual ability to obtain and evaluate health information available on the Internet.
  - ❖ On average, the students in this study correctly answered only 50% of the AAO and 39% of the AAE items.
- No statistically significant relationship existed between perceived and actual ability to obtain eHealth information (i.e., PAO and AAO). Results from this study support the notion that dissonance may exist within undergraduate students when considering their own confidence in searching for health information on the Internet.
  - ❖ Undergraduate students in health education may believe themselves to be adroit users of the Internet to obtain general types of information, but this belief of personal capability may not be compatible with performance when conducting eHealth searches to locate health information.
- There was a small yet positive correlation between perceived and actual ability to evaluate eHealth information (i.e., PAE and AAE).
  - ❖ Thus, perceived ability to evaluate eHealth information corresponded more with actual evaluation ability than did perceived and actual ability to obtain e-health information.
- The overwhelming majority of respondents in this study (77.9%) were interested in attaining a BS degree in health education in order to pursue an occupation in allied health (e.g., nurse, physician assistant, physical therapist, etc.). Perhaps these types of students are less inclined to skillfully search for health information on the Internet, given that this may be viewed as more of a research-oriented versus practitioner-oriented task.

Implications for Research and Practice

- From a professional preparation perspective, additional studies are needed to more fully (a) determine which particular cognitive attributes explain and predict eHealth literacy performance among undergraduate health education students and (b) understand how to develop eHealth literacy competencies within health professional college student populations.
- It is our belief that health and medical education degree programs across a variety of public health and health professional settings should consider developing planned learning experiences for their students to foster enhanced professional development opportunities in eHealth literacy.
- More instruction and coursework devoted to addressing the rapid shifts in the information landscape created by Web 2.0 tools and environments will enable college and university degree programs to be better positioned to nurture and develop eHealth literacy 2.0 competencies among future allied health professionals.