

UNDERSTANDING LEARNING PREFERENCES OF HIGH SCHOOL STUDENTS TO DEVELOP A SEXUAL HEALTH CURRICULUM

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Purpose

This study assessed the preferred learning style(s) of high school students to amend a sexual health workshop curriculum with the goal of creating an optimal learning environment.

Introduction

- The Medical College of Wisconsin's Department of Obstetrics and Gynecology has established a partnership with Escuela Verde, a Milwaukee charter high school, and provides a 4 week sexual and behavioral health workshop with 8-20 students participants.
- A review of the literature suggests that the success of a student's learning is determined by the similarity in the instructor's teaching style and the student's learning style¹
- The VARK[®] questionnaire² is a validated tool used to assess learning preferences

Methods

- IRB exemption status from Medical College of Wisconsin was granted**
- Survey**
 - 16-item VARK[®] questionnaires² were distributed to students during a lunch hour at Escuela Verde
 - Demographic questions of sex, age, grade, ethnicity, and primary language were also captured.
- Design**
 - The questionnaires were scored by categorizing each response as V, A, R, or K and assigning a point to each response
 - The number of points for each modality was determined for every questionnaire; means were calculated

A question taken from the VARK[®] questionnaire²

You need to give directions to a nearby house. I would:

- Walk with them.
- Draw a map on a piece of paper or get a map online.
- Write down the directions as a list.
- Tell them the directions.

The answer choices would be scored as:

a) Kinesthetic b) Visual c) Read/Write d) Aural

Preference	Best satisfied by	Examples
Visual	information in a graphical form (diagrams, charts, symbols)	
Auditory	information in a spoken form (listening and speaking)	
Read/Write	information displayed as words (reading and note-taking)	
Kinaesthetic	information through experiences (hands-on, tactile activities)	

Analysis

- Mean V, A, R, and K scores were compared between sex, grade, ethnicity, and primary language. Statistically significant differences ($p \leq .050$) were determined by analysis of variance and independent t-tests. Cohen's d calculated for effect size and relational measures were reported using Pearson correlations. IBM[®] SPSS[®] 24.0 generated statistical analysis.

Results

- 62 high school students participated in this study. Demographic breakdown is shown in Table 1.

Table 1

	Male	Female	Grade 7-9	Grade 10-12	non-Hispanic Ethnicity	Hispanic Ethnicity
Number of participants (incomplete survey)	27 (13)	22	18 (9)	35	20 (2)	40

- There was no single learning modality that most students preferred.
- Female students showed significant preference for the visual modality
- Students in younger grades and Hispanic ethnicity showed significant preference for visual and reading learning modalities. (Table 2,3,4)

Table 2

	Female	Male
Visual	5.91	4.37
	$r=0.55$ $p<0.008$	$r=0.2$ $p<0.326$

Table 3

	Grade 7-9	Grade 10-12
Visual	6.22	4.49
Reading	5.33	5.83
	$r=0.65$ $p<0.004$	$r=0.19$ $p<0.418$

Table 4

	Hispanic Ethnicity	Non-Hispanic Ethnicity
Visual	5.3	4.0
Reading	5.83	5.55
	$r=0.48$ $p<0.002$	$r=0.19$ $p<0.418$

Conclusions

- Assessing learning preferences when working with a diverse group of students can lead to the development of a more effective teaching tool and highlights the importance of a collaborative process when working on community based projects.

References

Fleming, N.D. and Mills, C. (1992), Not Another Inventory, Rather a Catalyst for Reflection, To Improve the Academy, Vol. 11, 1992., page 137.
James S, D'Amore A, Thomas T. Learning preferences of first year nursing and midwifery students: Utilizing VARK. Nurs Educ Today. 2011; 31:417-423.
VARK learning styles. Digital Image. Web. 21 April 2018. <pinimg.com>.