

# Nursing Education Curriculum: Relationship Among Imagination, Verbal, Visual, & Critical Thinking

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## Background

American Association of Colleges of Nursing (AACN; 2008) emphasizes the role and function of critical thinking for professional nursing practice in nine essential areas (e.g., high quality and safe patient care). One of the unique challenges of critical thinking is discovering a solution to open-ended problems because such dilemmas involve meaning, truth, and value simultaneously. Meaning, truth, and value can vary from the healthcare providers and patient perspectives. Until there is an agreement (meaning, truth, value), a framework for problem resolution can remain elusive (Hunter, 2014).

According to Reed (2010), awareness of verbal thinking versus visual thinking evolves in our reflections and communications with others. Our emphasis on verbal thoughts and language may cause us to minimize the value of visual thinking. Einstein's verbal and visual thinking skills were invaluable while imagining mental simulations (e.g., space travel alongside a light beam viewing physical bodies). Interior decorators and fashion designers use visual thinking to coordinate colors and create new clothing (Reed, 2010). Paivio (1986) reported the value of dual-coding theory of memory when subjects used visual images and verbal associations in memory investigations. Lorayne and Lucas (1974, p. 25) report the effectiveness of visual images for improving memory (e.g., airplane, tree, envelope, earring, bucket, sing, basketball, salami, star, nose).

Nicklaus (2005, p. 79) wrote:

I never hit a shot, even in practice, without having a very sharp, in-focus picture of it in my head. It's like a color movie. First, I "see" the ball where I want it to finish, nice and white and sitting up high on the bright-green grass. Then the scene quickly changes, and I "see" the ball going there: its path, trajectory, and shape, even its behavior on landing. Then there's sort of a fadeout, and the next scene shows me making the kind of swing that will turn the previous images into reality. Only at the end of this short, private, Hollywood spectacular do I select a club and step up to the ball.

## Methods

At Mt. Carmel College of Nursing, a *Psychology of Imagination* course was created as an elective option for BSN students. The sources for the verbal thinking information for the course were Close (2009), Keys and Haidt (2003), Peterson and Seligman (2004).

## Methods (Continued)

The design of the *Psychology of Imagination* course integrated verbal and visual thinking applied to the 16 constructs. Because four of the 16 constructs have undergone revision, 12 of the constructs were analyzed in this project: Nothing, Self-Regulation, Enthusiasm, Science, Flow & Flourishing, Love & Forgiveness, Peace & Conflict, Happiness & Contentment, Creativity, Integrity, Beauty & Excellence, and Culture & Gender. These constructs are essentially the same as Lunney's (2009) six cognitive skills and nine habits of the mind using critical thinking to achieve positive health outcomes.

The participants, in the critical, verbal, and visual thinking educational intervention, are traditional Bachelor of Science in Nursing (BSN) students in their 2<sup>nd</sup>, 3<sup>rd</sup>, or 4<sup>th</sup> year. BSN students provide pre-/post-test self-report visual thinking ratings for the 12 constructs. The students also provide verbal thinking explanations for their ratings. **Hypothesis:** Based on the educational intervention, there will be a significance difference between the pre-test and post-test visual thinking ratings.

## Findings

Using SPSS 25, the dependent *t*-test analyzed the pre- /post-test ratings which found increased ratings (i.e., *Mean* scores) at the post-test assessment ( $p=.001$ ).

t	df	Sig. (2-tailed)
4.467	56	.001
10.119	56	.001
20.966	56	.001
8.872	56	.001
20.058	56	.001
20.853	56	.001
10.583	56	.001
13.399	56	.001
6.37	56	.001
13.391	56	.001
10.638	56	.001
17.175	56	.001

## Conclusions

The dependent *t*-test findings allow us to reject the null hypothesis. The critical, verbal, and visual thinking educational intervention appears to be a way of explaining the mean differences at the post-test assessment. Further research investigations are required to specifically explore the role of critical thinking and this constructs relationship to verbal and visual thinking.

## References

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