



PERSONAL CRITICAL THINKING INDICATORS 2013 SURVEY RESULTS

Rosalinda Alfaro-LeFevre, RN, MSN, ANEF Web: www.AlfaroTeachSmart.com Email TeachSmartAlfaro@aol.com

PERSONAL CRITICAL THINKING INDICATOR (CTI) SURVEY SUMMARY

OBJECTIVE: To determine to what extent nurses in various positions agree that behaviors listed in the Personal Critical Thinking Indicators (page 7 of the complete 2012 CTI document available at <http://www.alfaroteachsmart.com/NewCTIReq.htm>) are behaviors frequent seen in critical thinkers (this study was done in preparation for updating the 2014 CTI document).

BACKGROUND: Critical thinking (CT) and clinical reasoning (CR) — essential 21st century nurse skills that require life-long development— continue to be challenging to teach and learn. Promoting CT and CR requires educators, preceptors, leaders, frontline nurses, and students to be on “same page” (same frame of reference) about what characteristics promote critical thinking habits. To avoid bias, this “page” should be explicit and based on evidence, rather than personal beliefs. Since 2002, when the CTI document was created, it has been used nationally and internationally (e.g. Australia, Canada, Europe, South America, Japan, New Zealand, Africa, The Philippines and The World Health Organization) to give a common frame of reference to help students and nurses develop critical thinking. While the complete CTI document includes lists of Knowledge and Intellectual Skills Indicators, this study focused on the Personal CTIs list. Developing personal CTIs (CT characteristics, attitudes, and behaviors) form the foundation for CT and CR. If someone develops the personal CTIs, these become habit and all other skills are likely to follow. To keep the CTIs relevant to current practice, it’s important to analyze not only current literature, but also the opinions of nurses actively involved in practice and education.

METHODS: Through my email list and via postings on nursing listservs, nurses were invited to complete the survey by rating each indicator using a 0 -10 scale (0 = Not at all a CT characteristic; 10 = Definitely a CT Characteristic). Participants were also asked to put a “P” if they recognized the characteristic from personal experience and an “L” if they remembered seeing this characteristic cited in the literature. If both applied, they were instructed to put both letters. They were asked to write comments as indicated. Participants then faxed or emailed back their completed survey. Several reminders were sent out after the first request in June, 2012 until October 1, 2013, when data collection was terminated. Participants were told that \$1 would be donated to fight breast cancer for every survey received.

RESULTS: Sixty-seven surveys were completed (58 nurses from the U.S; 5 from Canada; 2 from Puerto Rico and 2 from Spain). There were several surveys that were incomplete (meaning some indicators were not rated at all). No indicator received less than 63 ratings. The following demographics and thoughtful comments listed at the end here show that a broad group of highly knowledgeable, experienced nurses participated.

- The average number of years in nursing was 30.9 years. The range of experience in nursing was 3-50 years.
- Nine nurses listed Doctorate Degrees; 32 listed Masters Degrees; 12 listed Bachelors Degrees; 1 listed RN only; and 1 listed LPN only.
- 53% recorded at least one certification in their area of specialty

*In relation to the ratings of “P” and “L”, there was a wide variety of responses. While many completed this task, many also skipped it either totally or partially, making it difficult to come up with meaningful percentages. For this reason, this data has not been completely analyzed.

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RESULTS (continued)

- Participating nurses came from a broad range nursing positions. Most were professional development nurses, clinical educators, school of nursing educators (including online educators), and managers. Three were staff nurses.
- Specialty practices listed included Adult Health; Ambulatory Care; Agency Nursing; Cardiac; Critical Care; Emergency Care; Gerontology; Home Care; Long Term Care; Medical-Surgical; Neurosciences; Obstetrics/Women's Health/ Midwifery; Oncology; Operating Room; Pain Management; Palliative Care / Hospice; Pediatrics; Psychiatrics; Public Health / Community Health; Rehabilitation; Research, Wound / Ostomy Care.

CONCLUSION: The Personal CTI list has face validity —a significant majority of nurses who completed the study agree that these are attitudes, characteristics, and behaviors often observed in critical thinkers in current nursing practice (see summary of ratings for each indicator starting below). For this reason, it can be concluded that the behaviors listed in the updated personal CTI list (below) may be defined as behaviors that promote CT. This list will be included in the new CTI document available in 2014. The CTIs give a common frame of reference for students, nurses, preceptors, and leaders to identify behaviors that should be developed to promote CT. [NOTE: Comments and questions welcomed. If you're on my mailing list, you'll receive notification when 2014 CTI document is available online. If you're not, and want to be notified, send an email with NOTIFY ME_in the subject line to TeachSmartAlfaro@aol.com.]

SUMMARY OF RATINGS FOR EACH INDICATOR



PERSONAL CRITICAL THINKING INDICATORS (CTIs)

BEHAVIORS DEMONSTRATING CT CHARACTERISTICS / ATTITUDES

PERSONAL CTIs are brief descriptions of behaviors, attitudes and qualities often seen in individuals who are critical thinkers. Developing these behaviors, a life-long challenge, promotes critical thinking.

- ❑ **SELF-AWARE:** Identifies own learning, personality, and communication style preferences; clarifies biases, strengths, and limitations; acknowledges when thinking may be influenced by emotions or self-interest.

97% rated 8 or higher
3% rated 6-7

- ❑ **GENUINE / AUTHENTIC:** Shows true self; demonstrates behaviors that indicate stated values.

85% rated 8 or higher
12% rated 6-7
3% rated 5 or less

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(Ratings Summary continued)

- ❑ **EFFECTIVE COMMUNICATOR:** Listens well (shows deep understanding of others' thoughts, feelings and circumstances); speaks and writes with clarity (gets key points across to others).

87% rated 8 or higher
10% rated 6-7
3% rated 5 or less

- ❑ **CURIOS AND INQUISITIVE:** Asks questions; looks for reasons, explanations, and meaning; seeks new information to broaden understanding.

92% rated 8 or higher
6% rated 6-7
2% rated 5 or less

- ❑ **ALERT TO CONTEXT:** Looks for changes in circumstances that warrant a need to modify approaches; investigates thoroughly when situations warrant precise, in depth thinking.

95% rated 8 or higher
5% rated 6-7

- ❑ **REFLECTIVE AND SELF-CORRECTIVE:** Carefully considers meaning of data and interpersonal interactions, asks for feedback; corrects own thinking, alert to potential errors by self and others, finds ways to avoid future mistakes.

92% rated 8 or higher
8% rated 6-7

- ❑ **ANALYTICAL AND INSIGHTFUL:** Identifies relationships; expresses deep understanding.

94% rated 8 or higher
5% rated 6-7
1% rated 5 or less

- ❑ **LOGICAL AND INTUITIVE:** Draws reasonable conclusions (if this is so, then it follows that because...); uses intuition as a guide; acts on intuition only with knowledge of risks involved.

91% rated 8 or higher
8% rated 6-7
1% rated 5 or less

- ❑ **CONFIDENT AND RESILIENT:** Expresses faith in ability to reason and learn; overcomes problems and disappointments.

81% rated 8 or higher
15% rated 6-7
3% rated 5 or less

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(Ratings Summary continued)

- ❑ **HONEST AND UPRIGHT:** Looks for the truth, even if it sheds unwanted light; demonstrates integrity (adheres to moral and ethical standards; admits flaws in thinking).

85% rated 8 or higher
15% rated 6-7

- ❑ **AUTONOMOUS / RESPONSIBLE:** Self-directed, self-disciplined, and accepts accountability.

94% rated 8 or higher
3% rated 6-7
3% rated 5 or less

- ❑ **CAREFUL AND PRUDENT:** Seeks help as needed; suspends or revises judgment as indicated by new or incomplete data

94% rated 8 or higher
3% rated 6-7
3% rated 5 or less

- ❑ **OPEN AND FAIR-MINDED:** Shows tolerance for different viewpoints; questions how own viewpoints are influencing thinking.

88% rated 8 or higher
11% rated 6-7
1% rated 5 or less

- ❑ **SENSITIVE TO DIVERSITY:** Expresses appreciation of human differences related to values, culture, personality, or learning style preferences; adapts to preferences when feasible.

85% rated 8 or higher
14% rated 6-7
1% rated 5 or less

- ❑ **CREATIVE:** Offers alternative solutions and approaches; comes up with useful ideas.

82% rated 8 or higher
17% rated 6-7
1% rated 5 or less

- ❑ **REALISTIC AND PRACTICAL:** Admits when things aren't feasible; looks for useful solutions.

91% rated 8 or higher
8% rated 6-7
1% rated 5 or less

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(Ratings Summary continued)

- ❑ **PROACTIVE:** Anticipates consequences, plans ahead, acts on opportunities.
100% rated 8 or higher
- ❑ **COURAGEOUS:** Stands up for beliefs, advocates for others, doesn't hide from challenges
73% rated 8 or higher
24% rated 6-7
3% rated 5 or less
- ❑ **PATIENT AND PERSISTENT:** Waits for right moment; perseveres to achieve best results.
86% rated 8 or higher
12% rated 6-7
2% rated 5 or less
- ❑ **FLEXIBLE:** Changes approaches as needed to get the best results.
86% rated 8 or higher
14% rated 6-7
- ❑ **HEALTH-ORIENTED:** Promotes a healthy lifestyle; uses healthy behaviors to manage stress.
82% rated 8 or higher
17% rated 6-7
1% rated 5 or less
- ❑ **IMPROVEMENT- ORIENTED (SELF, PATIENTS, SYSTEMS):** **SELF**— Identifies learning needs; finds ways to overcome limitations, seeks out new knowledge. **PATIENTS**— Promotes health; maximizes function, comfort, and convenience. **SYSTEMS** — Identifies risks and problems with health care systems; promotes safety, quality, satisfaction, and cost containment.
97% rated 8 or higher
1.5% rated 6-7
1.5% rated 5 or less

PARTICIPANT COMMENTS

The following additional comments were offered:

- As an educator active in nursing practice, I find it interesting that not many truly understand critical thinking. For example, I believe that someone who is able to conduct research isn't necessarily the most intelligent. On several occasions, I have attempted to put its definition in my own words and struggle. In the early 90s when I started teaching, I noticed CT to be a buzz word for educators and it continues to be today. When students want to learn to critically

- think, I find it difficult to help them understand it and teach it. If I have my doctorate and struggle how can we expect others to know what it “truly” means?
- Some of the best critical thinkers I know struggle with creativity and being realistic, but I have seen them utilize resource people who do have these talents.
 - **Comment #1:** I think that a true critical thinker would never rely on magical thinking (Dawkins, Hutchins, Pennet, Harris) and that includes “intuition”. Intuition is not mysterious. It happens as true thinking, just sometimes on a level with pictures versus words/language. Just because you don’t have the words for something, it doesn’t mean you aren’t thinking. “Common sense” falls in the same category. You might not know who first told you to look both ways when crossing a street, but you never fail to do (without telling yourself in so many words, “Did you look both ways?” For nurses, being frightened by a patient “going bad” can be enough of a jolt that you never forget it, or it might get lost in the hectic pace of a shift and you only hear later that he went bad after you left. If you take that to heart as a critical thinker, you might ask yourself what you missed and how you can prevent complications earlier. Or in self-defense, your brain may process it in the background and one day when you see these signs again, you know it’s an emergency. But, you might not remember who it was you saw like this before, and then you might say it must be your “magical intuition” at work.
Comment #2: Yes, I believe everything else you listed is vital to CT, especially in nursing, where patients, families, and entire communities are in our hands. **Comment #3:** Critical thinkers can’t tolerate cognitive dissonance – it’s part of being intellectually honest. Example: You wouldn’t say you’re “pro-life” and then in the next breath, support the death penalty.
 - I find in my personal nursing experience in acute care that critical thinkers question “why” and look for connection of theory to interventions or changes in practice. They don’t resist change, but want to think things through to understand reasons. Critical thinkers aren’t afraid of being asked questions because they have thought about how things work and why they do what they do. They also know that answers change with circumstances. [**Comment from R. Alfaro-LeFevre:** *Curiosity* is a frequently-cited CT characteristic. To add a moment of humor to reading this study, I want to mention that one of the participants in the survey rated almost all the indicators a 9 or 10, but gave “curiosity” a 6. When I mentioned this to my husband, he responded, “Don’t want them to be TOO nose”. ☺]
 - I wonder if there’s a difference between the attributes of nurses’ generational differences. I think that maturity can be demonstrated in many people as well as behaviors you have listed as personal CTIs.
 - Not sure what is meant by “healthy” behaviors. Some critical thinkers I know are overweight, on medication for depression or relax with friends at a bar. [**Comment from R. Alfaro-LeFevre:** In the complete CTI document, under the Underlying Assumptions section, I comment on the health-oriented indicator by saying “poor health — especially if accompanied by uncomfortable symptoms, for example, fatigue or headache — impedes thinking.” Many excellent critical thinkers have some unhealthy habits. No one is perfect, but we can all improve. We see the importance of healthy behaviors and stress reduction more and more in the literature (see next comment).]
 - My conclusion from the critical thinking literature is that life-long learning and resilience are aspects of critical thinking that need to be stressed. From my observations of nursing and health care the value of resilience and healthy coping skills is beyond measure. The literature cites the value of reflection with critical thinking and the time and space for reflection need to be appreciated in our work environments. Thanks for asking – random thoughts.
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- It's interesting that many of the characteristics listed are exactly the same as those used to characterize leaders (not managers). And effective followers. I wonder if they are all inter-related?
- I realize my 10's are idealistic but hopefully this is what we are striving to. Those related to self-awareness, impassioned about learning, and improvement-oriented are absolute necessities to critical thinking skills. With "Open and Fair-minded" I would caution with "Shows tolerance for different viewpoints" as the other viewpoints need to held to the standard of they do not hurt someone or impair evidenced based or competent care. As a pain management nurse and also a Pain Advocate (as well as a person with persistent pain), there are too many nurses and physicians whose viewpoints are based on "opinions, weak or inconclusive evidence, bigotry, and arrogance based medicine. Those issues related to ethics can also be problematic as some cannot get past what their morality and values are (in Palliative care we see this is *quality* of life versus *quantity* of life
- I think I would add: 1) Regularly updates self by reading current literature and by attending in-services and CE related to one's practice. 2) Synthesizes information to create a complete picture before making judgments calls. 3) Exhibits cautionary behaviors appropriate to the situation.*
- Improvement oriented – hmmm...lots to think about.
- In terms of the improvement-oriented descriptor I wonder if there is different language, Improvement suggests a deficit, something lacking. Growth oriented? Something from the strengths-based approach literature that might seem less deficit sounding. I use the 4-Circle approach with students to help them understand CT. I find it very useful. Thank you for your diligence in this work. [**Comment from R. Alfaro-LeFevre:** The relationship between the 4-Circle Model and the CTIs is displayed on the second to the last page of the complete CTI document.]
- I have read a great deal about CT and don't have specifics. All but one (patient and persistent) I have read about before.
- I do hope you'll be letting us know the results of your survey. Thank you for continuing on this CT study.
- A lot of the literature I've read on CT has been authored by you. You are the "guru" of CT at our school.

* These behaviors are included in the Knowledge and Intellectual skill indicators listed in the complete CTI document