

# ***CURIOSITY SKILLED THE CAT***

## **Professional Curiosity and Critical Thinking as keys for continuing professional development**



**Joan Verhoef, PhD & Mieke Cardol, PhD**  
**Rotterdam University of Applied Sciences**

Research Centre  
Innovations in Care



# Rotterdam University of Applied Sciences

- ▶ Rotterdam University of Applied Sciences School of Health Care Studies offers professional education to **occupational therapists**, physical therapists, speech-language therapists, nurses, midwives
- ▶ Research centres are part of Universities of Applied Sciences and contribute to professional practice by connecting professional practice with (professional) education and research.



# Curiosity **skilled** the cat...



applied **research**



# Did you know?

- ▶ Diversity in society and increasing demands for impact in health care lead to more complexity in occupational therapy practice.
- ▶ Next to professional skills, curiosity and critical thinking help to raise vital questions, clarify dilemmas or take new directions.
- ▶ As one of the 21st century skills, critical thinking is significant for occupational therapists and the development of the profession.
- ▶ Critical thinking is crucial for quality decision making (Finn et al., 2016; Brudvig et al. 2013).



# Objective of our project

- ▶ To increase critical thinking, professional curiosity and research skills and stimulate continuing professional education in a team of OT lecturers,
- ▶ In order **to improve quality of OT education.**



# Professional Curiosity



## Heart:

- ▶ Eager to learn, interest or passion, gut feelings, a desire to know, understand or to investigate, independence



## Reason:

- ▶ Professional curiosity: capacity and communication skill to explore and understand what is happening (The Brighton & Hove Local Safeguarding Children Board).



## Hands:

- ▶ Curiosity as a skill that can be developed by building the capacity for inquiry;
- ▶ Question asking ability: formulating questions aiming for understanding

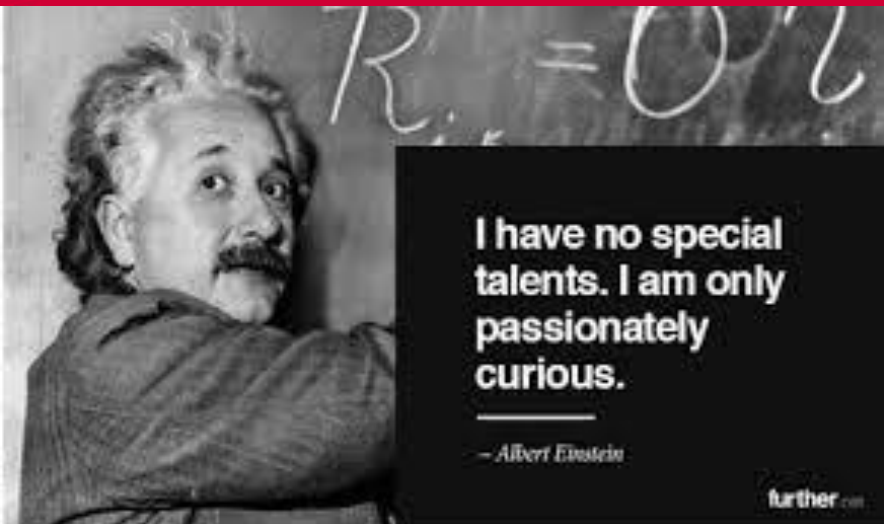


“ I have no special talents.

I am only passionately

curious *(Albert Einstein)*

”



# Critical Thinking



- ▶ ‘The **purposeful, self-regulatory judgement** that results in interpretation, analysis, and inference, as well as explanation of the considerations upon which that judgment is made’ (Brudvig et al., 2013; Heijltjes et al., 2014)
- ▶ ‘The **ability and willingness** to assess claims and make judgments on the basis of well-supported reasons and evidence rather than emotion and anecdote’ (Finn et al., 2016)
- ▶ Refers to **open-mindedness** in concerning divergent worldviews, flexibility in considering alternatives and opinions, willingness to reconsider and revise views when change is warranted, honesty in facing personal biases (Heijltjes et al., 2014; Velde et al., 2006)



# Critical Thinking is about...

- ▶ **Asking questions**
- ▶ Assess evidence, evaluate arguments and adapt your thinking
- ▶ Involves **stepping back** from a situation to enable you to see all the angles before making judgments or taking decisions
- ▶ Analyzing sources of information, identifying key points and weighing off different types of evidence
- ▶ Putting it all together into your own **independent** thought-trough point of view.
- ▶ It is also about a sense of discovery
- ▶ Being **creative, reflective and adaptable**, evaluating evidence to decide for yourself what is relevant, and if you have sufficient information to take a decision, and subject all available options to a sense of scrutiny.



# What would you like to know?



# Method

- ▶ We created **professional learning communities (PLCs)**. PLCs work inquiry-based on a relevant OT-theme and present method and results in team meetings twice a year.
- ▶ Relevant themes were determined in team meetings and prioritized
- ▶ All team members signed up for a theme and based on their interests, PLCs of 4-6 OT-lecturers were assembled for each theme
- ▶ We started with 2 PLCs on prioritized themes (*‘Client-centred OT’ and ‘Community-based and technology-based OT’*)
- ▶ After 1 year, a third PLC started (*‘Learning abilities of persons with dementia’*)
- ▶ PLCs are coached to develop research skills and increase knowledge
- ▶ Other team members are encouraged to ask **curious and critical questions**.

## WHAT IS A PLC?



An ongoing process in which educators work collaboratively in recurring cycles of collective inquiry and action research to achieve better results for the students they serve.



# Experiences

**PLCs** started with the same instruction but had different dynamics and working methods. (e.g. working systematically and working and learning together versus discussing, wandering).

➤ **PLCs enjoy doing their research, are now eager to learn; research is not scary anymore**

## **Coaching of PLCs:**

- ▶ PLCs asked few questions and little coaching – they wanted to work and discuss the theme;
- ▶ Coaches had to take initiative - visit PLC-meetings, think along, structure the process.

## **Team meetings:**

- ▶ 1<sup>st</sup> meeting: team members advised PLCs, leaped into discussion
- ▶ Next meetings: questioning was structured, team members were encouraged to ask clarifying questions; PLCs were invited to engage team members with a small task.



# Challenges

- ▶ **Knowledge and skills:** differences in knowledge and research skills of lecturers (e.g. Master education <-> no research education or experience)
- ▶ **Resources:** To allocate (and spend) time and persons to work regularly and yield results
- ▶ **Leadership** and the role of the team manager
- ▶ **Continuity:** to keep the PLC going, the team members involved
- ▶ **Diversity in learning:** every team member has his own way of learning, and each PLC has his own dynamics
- ▶ **Results:** both about the process and content/themes
- ▶ **Future:** collaborate with professional practice (professionals and clients)



# Linking our experiences to the literature

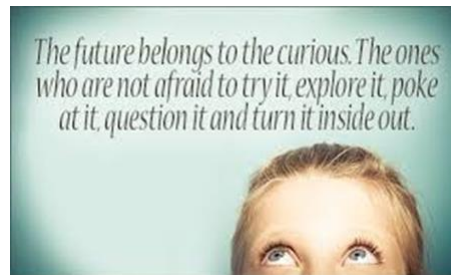
- ▶ **Ask yourself: WHY?** (Golden Circle, Sinek)
- ▶ Learn to ask critical questions and **dare to doubt!** (Velde et al., 2006)
- ▶ Importance of explicit instructions with practice (Heijltjes et al., 2014, 2015)
- ▶ Dig deeper: engagement + recognition of the information + different learning strategies: UDL (Meyer et al., 2014)
- ▶ Importance of leadership and engagement team manager (Verbiest, 2011)
- ▶ It is a process: not always easy to show changes with available instruments (Zettergen, 2014; Keiller & Hanekom, 2013)



# Conclusions

- ▶ Critical thinking is important in professions that rely on complex decision making
- ▶ In the current complex and rapidly changing health care environment, critical thinking and professional curiosity are essential skills for occupational therapists in order to make sound clinical decisions and to provide competent client-centred care.
- ▶ Creating professional learning communities, aiming to increase knowledge of professional themes, can enhance the development of critical thinking, professional curiosity and research skills in a team OTs

**REMAIN CURIOUS AND KEEP ASKING QUESTIONS!**



# References

- ▶ **Brudvig**, T.J., Dirkes, A., Dutta, P. & Rane, K. (2013). Critical thinking skills in health care professional students: a Systematic Review. *Journal of Physical Therapy Education*; 27 (3):12-25.
- ▶ **Finn**, P., Brundage, S.B. & DiLollo, A. (2016). Preparing our future helping professionals to become critical thinkers: a Tutorial. *Perspectives of the ASHA Special Interest Groups*, 2016; 1(10):43-68.
- ▶ **Heijltjes**, A., Van Gog, T., Leppink, J. & Paas, F. (2015). Unravelling the effects of critical thinking instructions, practice, and self-explanation on students' reasoning performance. *Instructional Science* 43:487–506.
- ▶ **Heijltjes**, A., Gog, T. van & Paas, F. (2014). Improving students' critical thinking: empirical support for explicit instructions combined with practice. *Applied Cognitive Psychology*, 28:518–530.
- ▶ **Keiler**, L. & Hanekom, S.D. (2013). Strategies to increase clinical reasoning and critical thinking in physiotherapy education. *South African Journal of Physiotherapy*, 70(1):8-12.
- ▶ **Meyer**, A., Rose, D.H. & Gordon, D. (2014). Universal design for learning (UDL); theory and practice. CAST inc.: Wakefield.
- ▶ **Velde**, B.P., Wittman, P.P. & Vos, P. (2006). Development of critical thinking in occupational therapy students. *Occupational Therapy International* 13(1):49–60.
- ▶ **Verbiest**, E. (2011). Developing professional learning communities. (Paper presented at the AERA conference).
- ▶ **Zettergen**, K.K. & Becket, R. (2004). Changes in critical thinking scores: an examination of one group of physical therapist students. *Journal of Physical Therapy Education*, 18(2):73-79.
- ▶ **Sinek**, S. [How great leaders inspire action | TED Talk](#)