

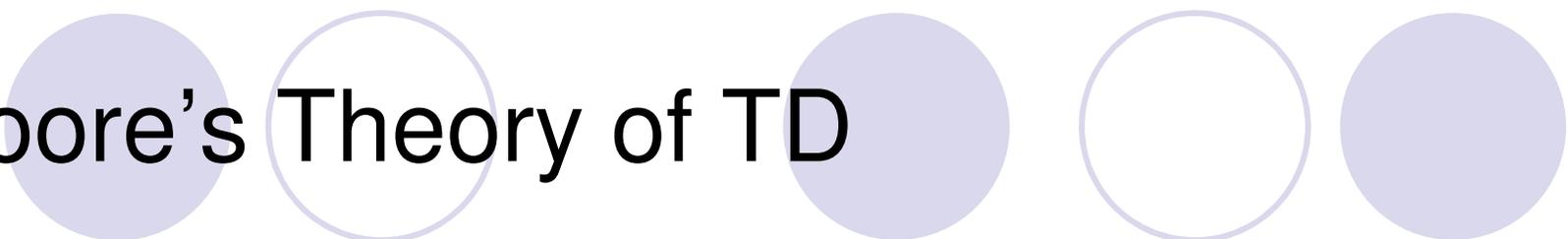
# Transactional Distance in Distance Learning: Theory, Issues and Impacts

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In this presentation...

- Moore's Theory of TD
- Current understanding
- Recent research
- Applications to Distance Education

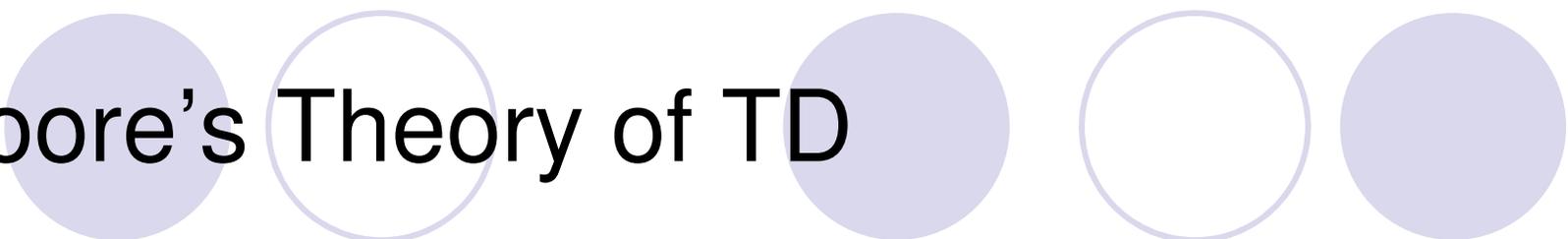


# Moore's Theory of TD

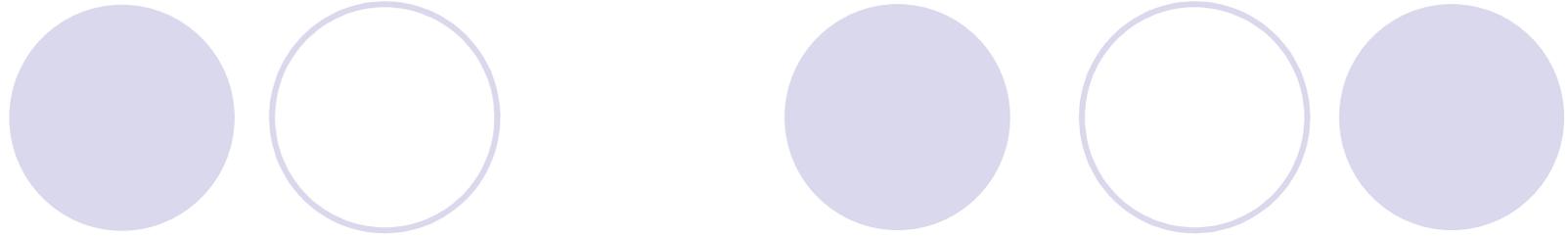
TD is *'the physical separation that leads to a psychological and communications gap, a space of potential misunderstanding between the inputs of instructor and those of the learner...'*

(Moore, M. G., *The American Journal of Distance Education*, 5 (3), 1991)

# Moore's Theory of TD



- There is *always* TD in any learning environment.
- Two key variables impact on TD
- Dialogue - communication between teacher and learner
- Structure - course elements, such as activities, learning outcomes and content.
- As dialogue increases structure decreases



→ A function of:

→ Structure

→ Dialogue

→ In relation to student control/autonomy

***Transactional***

***Distance***



→ “*Dialogue is the extent to which in any educational program, learner and educator are able to respond to each other*” (Moore, 1983).

→ Information ‘richness’

→ Response times - how quickly the teacher can reply to student queries

→ Relevance - to the course, the student’s needs and preferences

# Dialogue



→ Instructional design variables

→ Content

→ Outcomes

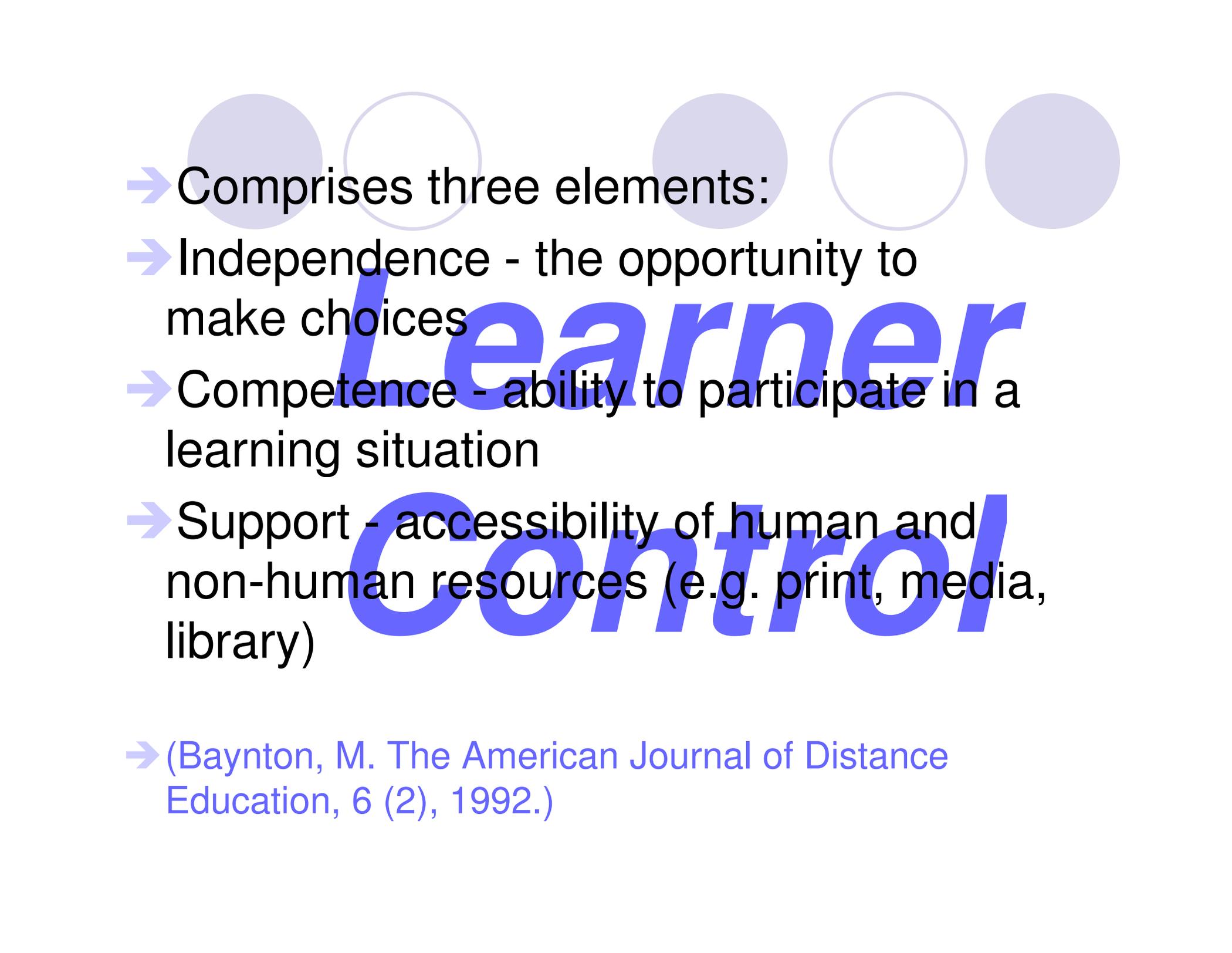
→ Activities

→ Methods

→ 'Individualisation' of the course materials and methods of delivery.

→ How well the course structure meets the needs of the individual

# Structure

- 
- Comprises three elements:
  - Independence - the opportunity to make choices
  - Competence - ability to participate in a learning situation
  - Support - accessibility of human and non-human resources (e.g. print, media, library)
- (Baynton, M. The American Journal of Distance Education, 6 (2), 1992.)

# Recent TD Research



- Systems Dynamics Model verifies dialogue and structure effects ([Saba & Shearer, 1994](#)).
- Learner perceptions of quality/value are enhanced when dialogue is increased ([Anderson & Garrison, 1995](#))
- Comparative study ([Biscoff, et al, 1996](#)).
- Remote learner needs study ([Wheeler, et al, 1999](#)).

# Systems dynamics study

(Saba and Shearer, 1994)

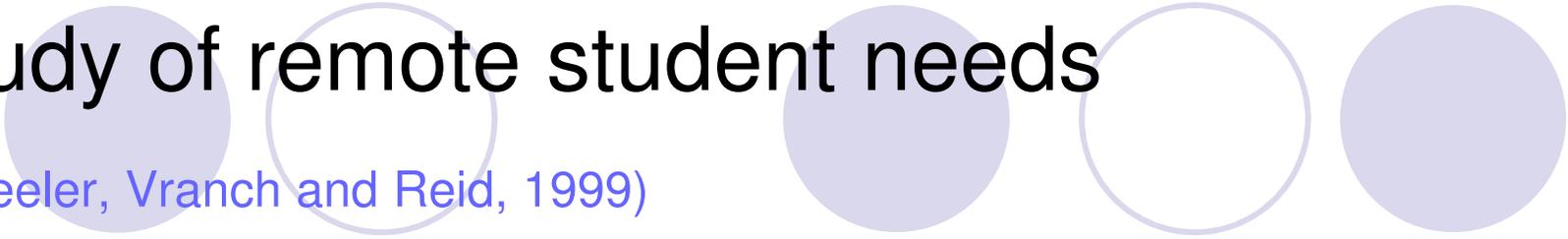
- A mathematical equation was developed to explain the relationship between dialogue, structure and TD
- The study also investigated learner and teacher control
- Analysis of videotaped sessions (n=30)
- TD varies according to dialogue and structure

# Group comparison study

(Biscoff, Bisconer, Kooker & Woods, 1996)

- Comparison between 2 groups (local and remote)
- Determine the relationship between TD, dialogue and structure
- Questionnaire study (n=221)
- Dialogue and structure scores lower (and TD higher) in f2f group.
- TD scores higher where no e-mail used

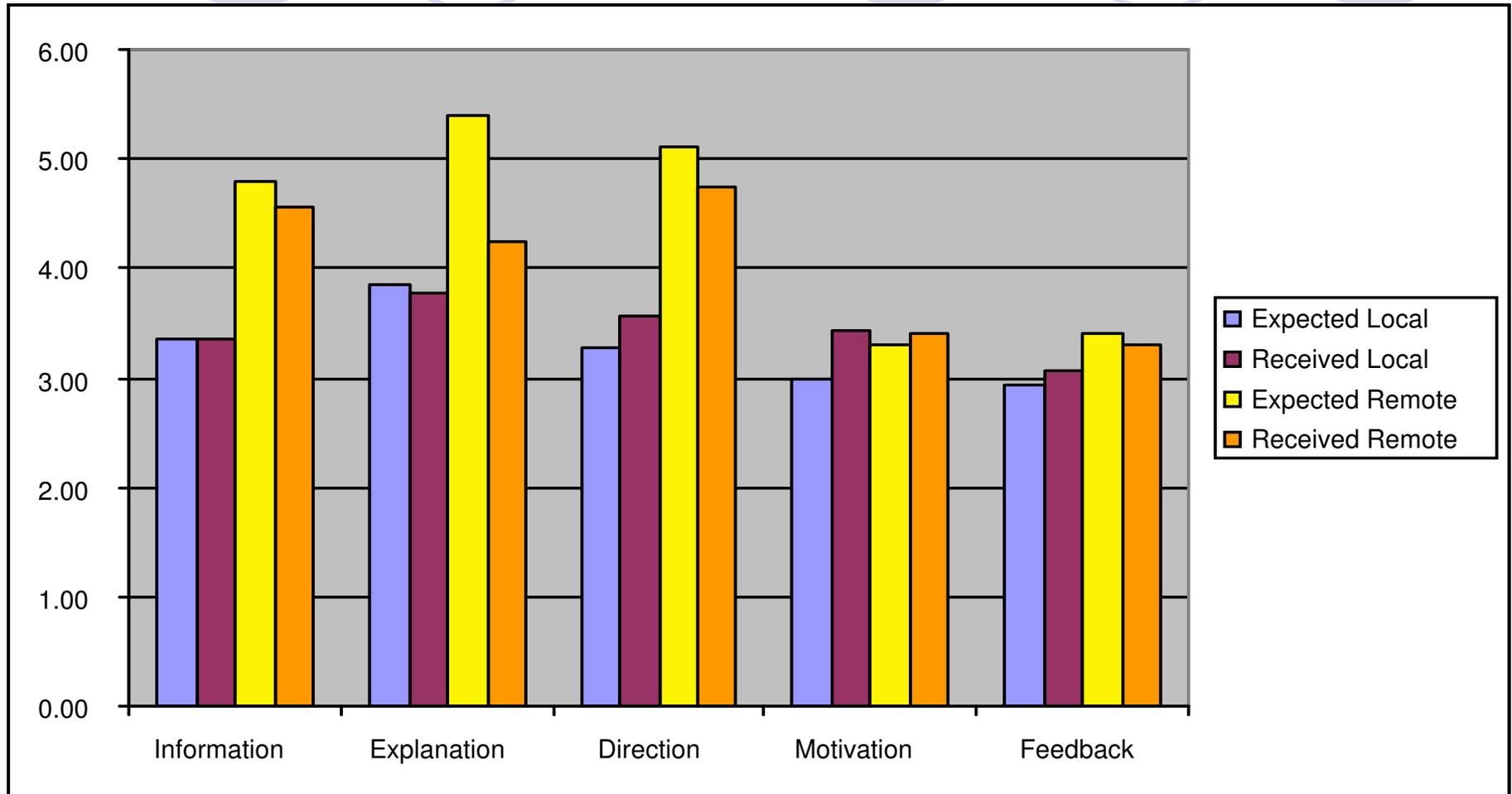
# Study of remote student needs



(Wheeler, Vranich and Reid, 1999)

- 2 groups of learners (f2f and DE, n=60)
- Factor analysis of 22 item questionnaire
- Analysis of variance between 5 layers of dialogue / tutor support
- Remote learners expect (and receive) more dialogue / tutor support
- Study to be extended longitudinally

# Results of study by Wheeler et al





# TD - Concept and Issues

- TD cannot be measured in miles or hours - it is a psychological concept.
- Is TD a potential problem for students?
- Is TD a potential problem for teachers?
- What about support media?

# TD - Implications for DE

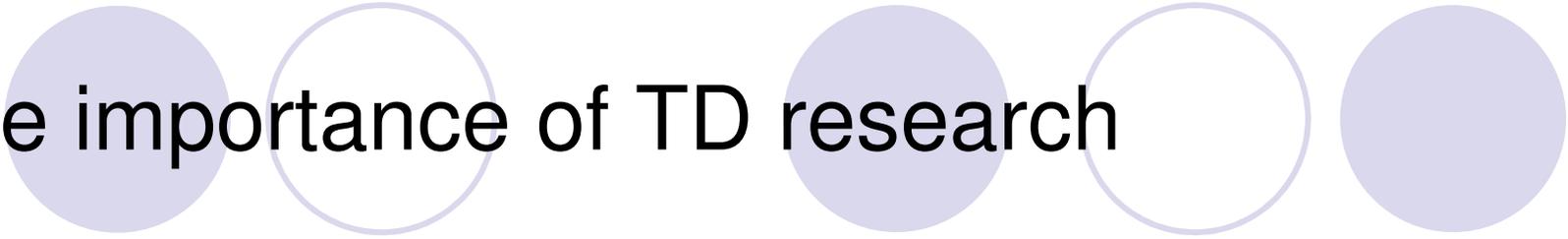


## → Instructional design

- ↓ Build in opportunities for dialogue
- ↓ Create multiple modes of delivery

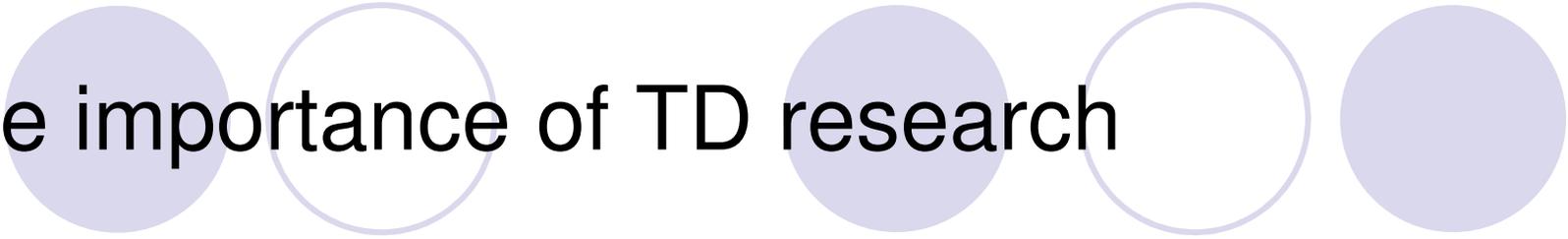
## → Delivery methods

- ↓ Synchronous & Asynchronous
- ↓ Peer networking
- ↓ Response times



# The importance of TD research

- TD creates uncertainty by increasing the potential for misunderstanding
- TD evokes feelings of isolation
- TD causes students to consider factors other than the course materials



# The importance of TD research

→ A reduction in TD enables students to:

- ↓ increase understanding
- ↓ reduce uncertainty
- ↓ raise motivation
- ↓ combat feelings of isolation

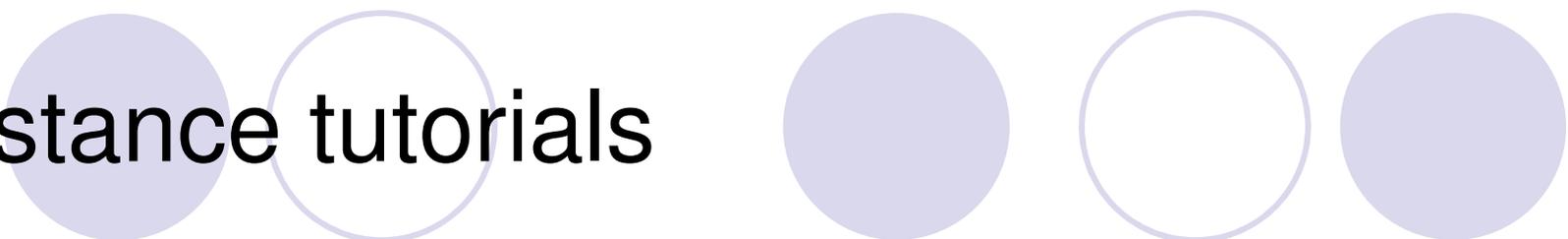


# The importance of TD research

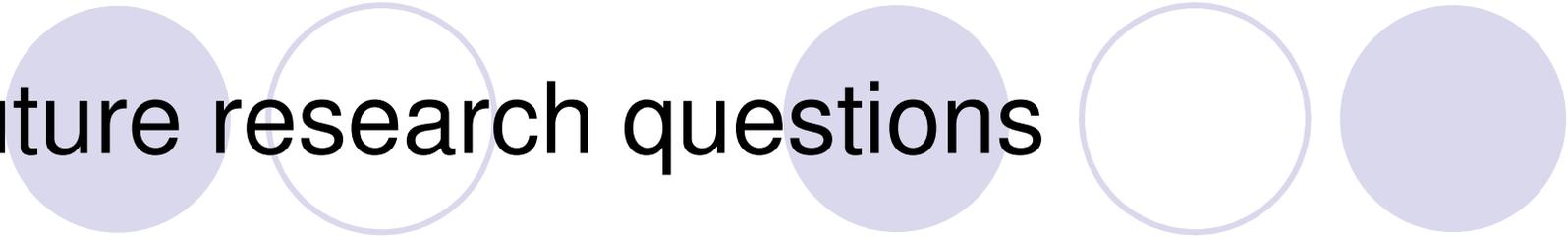
→ TD is a useful explanatory framework to explain:

- ↓ the nature of dialogue in DE
- ↓ how students interact using various media/technologies
- ↓ the qualitative difference between local and remote group 'presence'

# Distance tutorials



- Achieving a 'virtual' presence
- Importance of co-presence (social dimension of learning)
- Engaging all students equally
- Reducing misunderstandings
- Ameliorating demotivation due to feelings of isolation



# Future research questions

- Do teachers over compensate for remote learners when teaching local and remote groups simultaneously?
- Can TD be influenced by media and technology?
- Do some instructional methods reduce psychological distance better than others?
- What about individual differences?