Active methodologies and e-learning environments: challenges and trends

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The Theory of Transactional Distance

- Distance education was defined, for the first time, as: “the family of instructional methods in which

the teaching behaviors are executed apart from the learning behaviors . . . so that communication

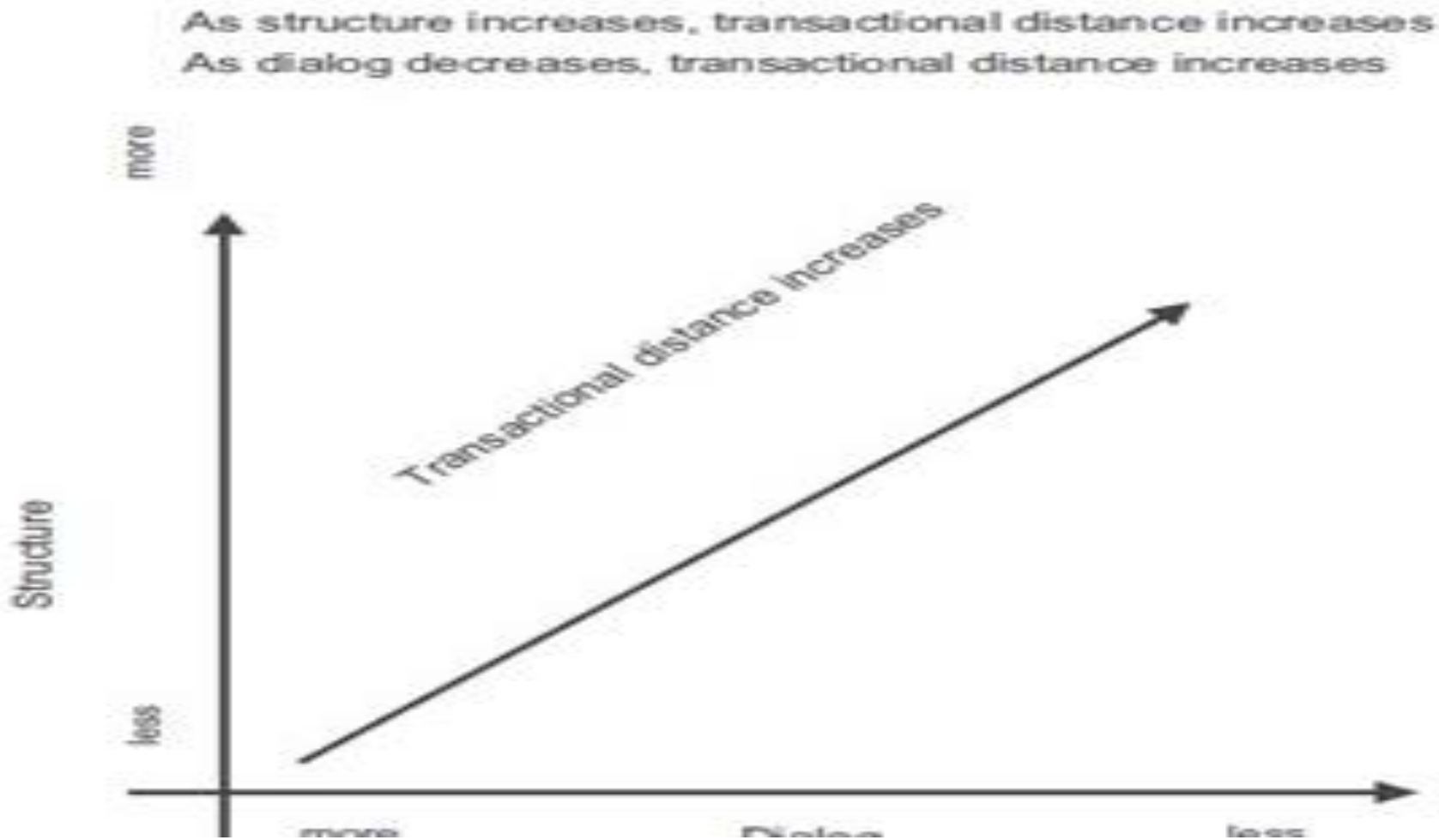
between the learner and the teacher must be facilitated by some device

(Moore, 1972, p. 76).

So there is a separation and distance between teacher and learner not just geographically but also psychologically. The learners feel they are not understood by their teachers and this will lead to reeducation of motivation of e-learning students. Generally, Moor;s theory of transactional distance describes three macro factors in e-learning environments:

- First, program’s “structure;” the second, derived from analysis
- of interactions between teachers and learners was labelled as “dialogue” in the program. The third,
- based on analysis of the behaviors of students in the programs, described the extent to which they
- participated in making decisions normally reserved exclusively for teachers, decisions about what to
- learn, how to learn, and how much to learn, which was labelled as “autonomy.”
- Moor believed these 3 factors can decrease or increase this transactional distance as we can see in figure 1

The Theory of Transactional Distance



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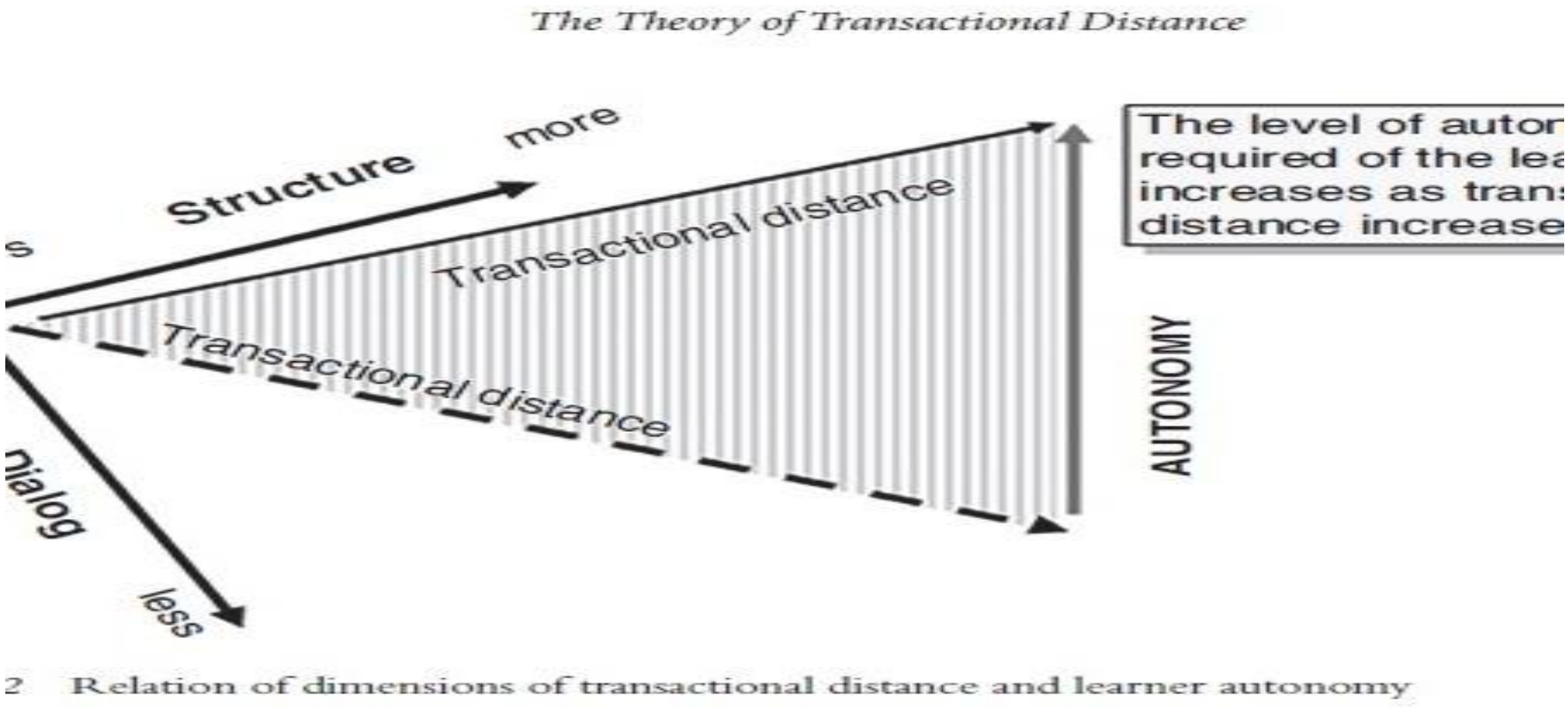

2 Relation of dimensions of transactional distance and learner autonomy

Foundations for Design

- . Successful online course design starts from a solid foundation of alignment, communicates clear expectations to learners, and is informed by learner needs. These core design elements apply to all subject matter, strategies, and desired outcomes.
- Active learning strategies can then be layered onto this foundation to optimize learning for online distance education.

Alignment

- “The success of any online learning environment is determined by the degree to which there is adequate alignment among eight critical factors:

1) goals, 2) content, 3) instructional design, 4) learner tasks, 5) instructor roles

6) student roles,

7) technological affordances, and 8) assessment.” (Reeves, 2006, p. 294)

Expectations

Another foundation of successful course design is clarity of expectations. there are nine instructional events—gaining attention, informing learners of objectives, stimulating recall of prior learning, presenting stimulus material, providing learning guidance, eliciting performance, providing feedback, assessing performance, and enhancing retention and transfer—all of which are categorized by sequential levels of complexity to guide instructional design

Focus on Active Learning

- Building on the foundational elements, course designers must determine the most appropriate instructional strategies to achieve desired outcomes while meeting learner needs. Instructional strategy is defined as “a teaching strategy that includes how the instruction is delivered (the physical delivery: lecture, correspondence, television, computer, etc.). It also includes the means by which the instructor communicates in the classroom, such as active, passive, questioning, etc.” (Simonson & Schlosser, 2009, p. 158).

Therefore, the online delivery mode affords a more active and reflective learner-centered experience if appropriate strategies are applied in online classes

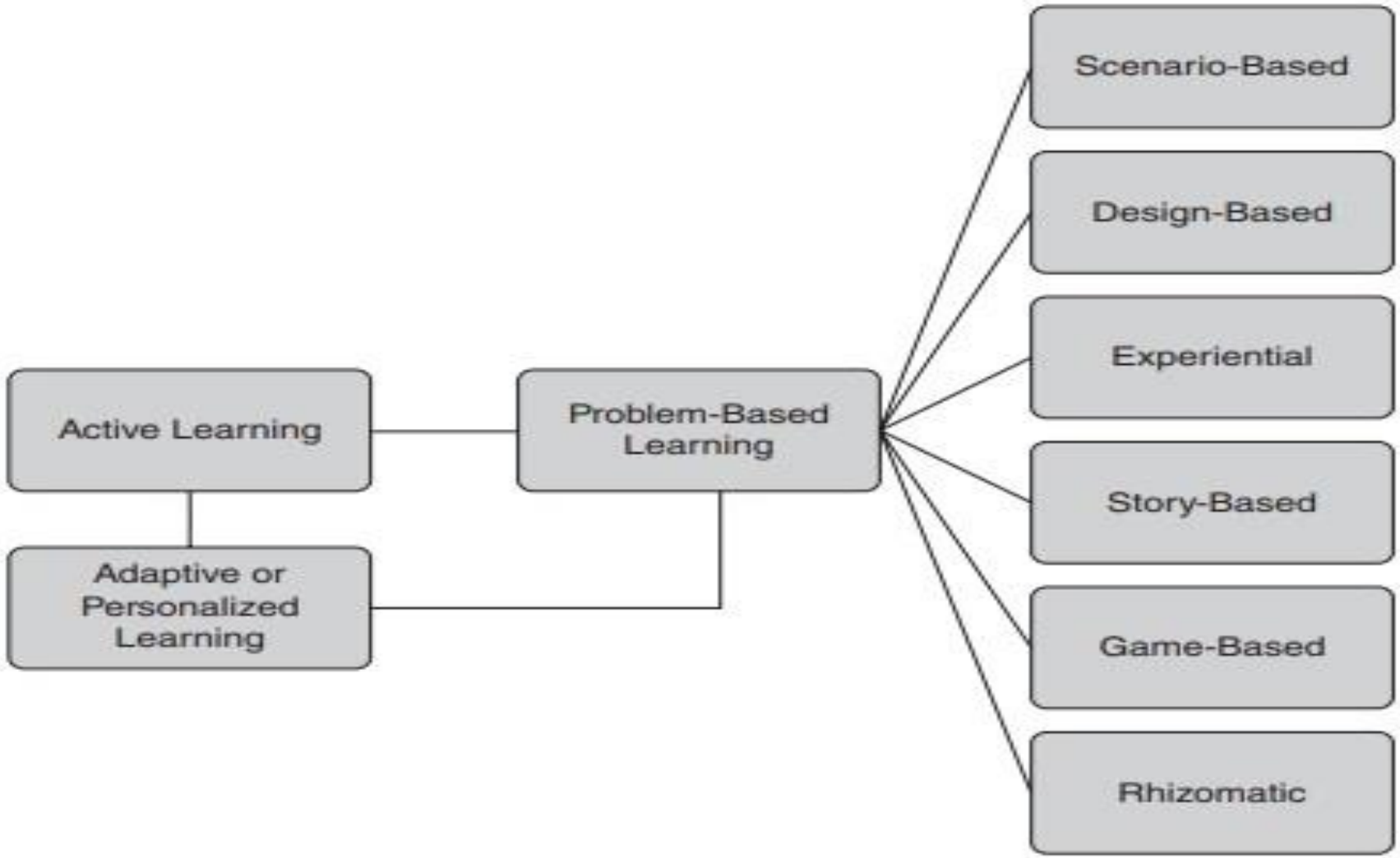

Figure 20.1 Relationship of instructional strategies

Problem-Based Learning

- Prince describes problem-based learning as “an instructional method where relevant problems are introduced at the beginning of the instructional cycle and used to provide the context and motivation for the learning that follows.” (Prince, 2004, p. 223) Problem solving may be considered the root or may act as a catalyst for all other learning strategies, because it challenges learners to utilize and advance to high-order cognitive learning skills within a specific domain and context.
- Course designers may design instruction to engage learners through well-structured or ill-structured problem types. Well-structured problems guide learners through a process to a presumed solution by utilizing prescribed content and applications presented within the domain, whereas, ill-structured problems are unconstrained and challenge the learner to work across disciplines and contexts to determine and advocate for an unprescribed solution

Scenario-Based Learning

- Scenario-based learning strategies challenge the learner to complete a goal or task by applying both skills and knowledge in a simulated, unstructured and authentic problem (Naidu, Oliver,& Koronios, 1999). The online learning environment offers learners to gain skills and knowledge before applying to real-world practice while being immersed in a non-threatening, low-stakes environment.

Experiential Learning

- Through a cyclical process of reflection, experiential learning asks learners to contemplate the learning activity, whether created by the instructor or from previous experience, and analyze improved strategies for future iterations. Experienced-based learning theory suggests that learning is “the process by which knowledge is created through the transformation of experience, knowledge results from the combination of grasping and transforming experience” (Kolb, 1984, p. 41).

Story-Based Learning

- Due to the rapid evolution of technology, multimedia and interactive elements offer advanced solutions for story-based learning experiences in online learning environments. Story-based learning immerses the learner in a multimodal designed story to enable the learner to process the highly sophisticated information in a creative, effective, and aesthetically pleasing approach (Kose, Koc, & Yucesoy, 2013). The story-based learning instructional strategy enhances student engagement through emotion, relevancy to the context of the activity, reflection to personal experiences, and authentic application.

Game-Based Learning

- At the interplay and advancements of instructional theories, learning theories and instructional technologies, game-based learning has emerged as a strategy to present creative and innovative solutions to 21st century education and training. Game-based learning is most effective when it provides immediate feedback and administers assessment during the learning process (Ifenthaler, Eseryel, & Ge, 2012).
- Incorporating games as an instructional strategy in an online distance education course can help learners identify learning goals, build mastery, increase motivation, personalize learning, and track task completion. Game-based learning strategies motivate learners to play and to gain knowledge, skills and improved performance simultaneously

(Loh, Sheng,& Ifenthaler, 2015)

Design-Based Learning

- The design-based learning strategy personalizes learning by actively supporting students through a self-directed, authentic problem-solving process and by scaffolding applied knowledge to design original artifacts for project-based assignments (Feng et al., 2017).
- Design-based learning places students in the center of an iterative learning process and challenges higher-order skills to work through design constraints and offer solutions to open-ended problems. The instructor serves as a facilitator and guides students through competency by modeling design thinking, provoking inquiry, supporting reflection and scaffolding learning design.

Rhizomatic Learning

- Rhizomatic learning affords learners to negotiate knowledge within in a community's given context through a fluid, real-time process with fluctuating goals and shifting expectations (Cormier, 2008).
- There are five elements to the rhizomatic learning strategy framework: transdisciplinary and heterogeneity, open teams, emergent education, external place, and playful or challenging schemes (Bissola et al., 2016). Rhizomatic learning strategies can be leveraged through Web-based technologies to create a "digital habitat" for a community of learners (or practice) to share and produce knowledge through self-designed activities.

Thanks for your attention

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