

Virtual Game Method in Higher Education

Training session II
Parnu, November 2015

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Constructivist approach in teaching and learning with games

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Constructivist approach

Learning takes place when:

- New information is built into and added onto an individual's current structure of knowledge, understanding and skills
- Learners construct their own knowledge in an active way (active learning strategies)
- Learners use their previous knowledge in building new knowledge
- Involves the use of variety resources
- Authentic tasks in a meaningful context are encouraged
- Reflection on prior knowledge is encouraged
- Collaborative work is encouraged
- Autonomy is encouraged



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Principles of adult learning

Adult learning occurs best when it:

- Is self-directed
- Fills an immediate needs
- Is participative
- Is experiential
- Is reflective
- Provides feedback
- Shows respect for the learner
- Provides a safe atmosphere
- Occurs in a comfortable environment



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HOW TO DESIGN THE CLASS AND HOW TO TEACH ACCORDING TO CONSTRUCTIVE ALIGNMENT?



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Activity 1

- Give examples of something you have learned just by trying to do it, without reading or receiving instructions about it.



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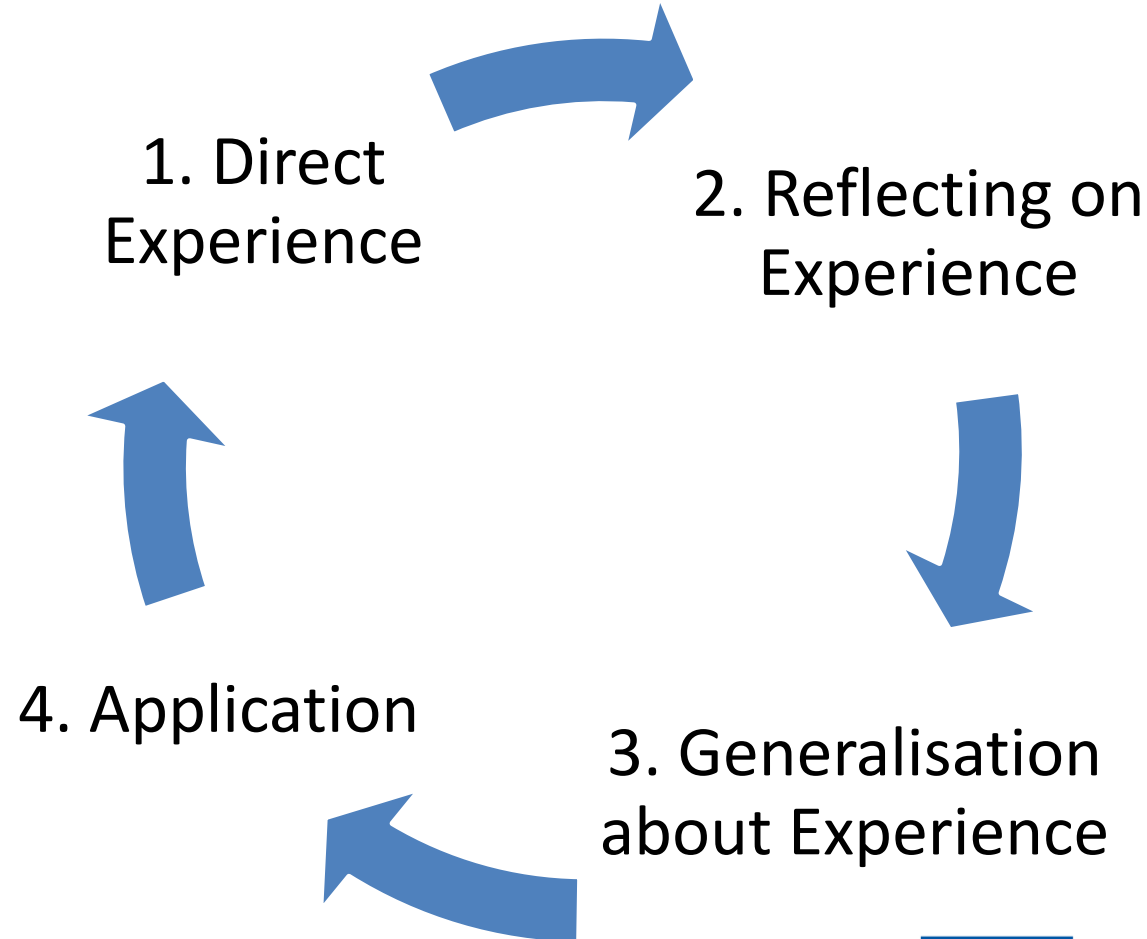
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Kolb's experiential learning theory

- **Learning** is the transformation of information into useful knowledge and skills
- The **learner** needs to go through four different stages of the learning process
- **Learning** starts with the *direct experience*, which is *analyzed* in the *reflective* process and then the **learner** *forms principles* which are *applied* in the last phase



Kolb's learning cycle



Activity 2

- Can you give any examples from your teaching practice when you might use the Kolb's cycle in class designing?



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Activity 3

- What happens in each phase of Kolb's learning cycle?
- What activities/teaching strategies might be used in class designing?

Handout 1



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1. Direct experience

- The learners uncover new information that requires a response on their part

Activities to use:

- Group problem solving
- Case study
- Role plays
- Field visits
- Skills practice
- Games
- Group task



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2. Reflecting on the experience

- The learners sort out the information, analyze the experience

Activities to use:

- Small group discussion
- Participant presentation
- Large group discussion
- Reporting from small groups
- Blogs



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3. Generalisation about experience

- The learners interpret what was discussed earlier, draw conclusions, learn new rules

Activities to use:

- Lecturers
- Demonstration
- Reading assignments
- Group problem solving
- Sum up discussion



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4. Application

- The learners make connection between the learning setting and the real world; doing something in practice

Activities to use:

- Project
- Action planning
- Field visits
- Practicing new skills



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Activity 4

Think about designing game class. Overthink Kolb's learning phases, especially point at:

- Activities to use/teaching strategies
- The students' role and activities
- The teacher's role and his tasks

- Handout 2



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Summing up

- People learn the best in an active way
- Games make students to be active
- Doing (playing games) is not enough for learning
- The teacher as a facilitator
- Reflection on experience, generalisation about experience and application are the key elements of an learning process
- The teacher is responsible for creating the room for all the phases and make students go through the process



References

- Biggs J., Tang C. [2007], *Teaching for Quality Learning at Univeristy*, McGraw Hill, New York.
- Pritchard A., [2009], *Ways of Learning: Learning Theories and Learning Styles in the Classroom*, David Fulton Publishers.
- Kolb, D.A. [1984], *Experiential learning: experience as the source of learning and development*, Englewood Cliffs, Prentice Hall, New York.
- Fosnot C. T. [2005](ed.), *Constructivism: Theory, Perspectives, And Practice*, Teaching College Press, Columbia University, New York - London.



Team-based learning. The roles of learners in group working

Anna Wach-Kąkolewicz

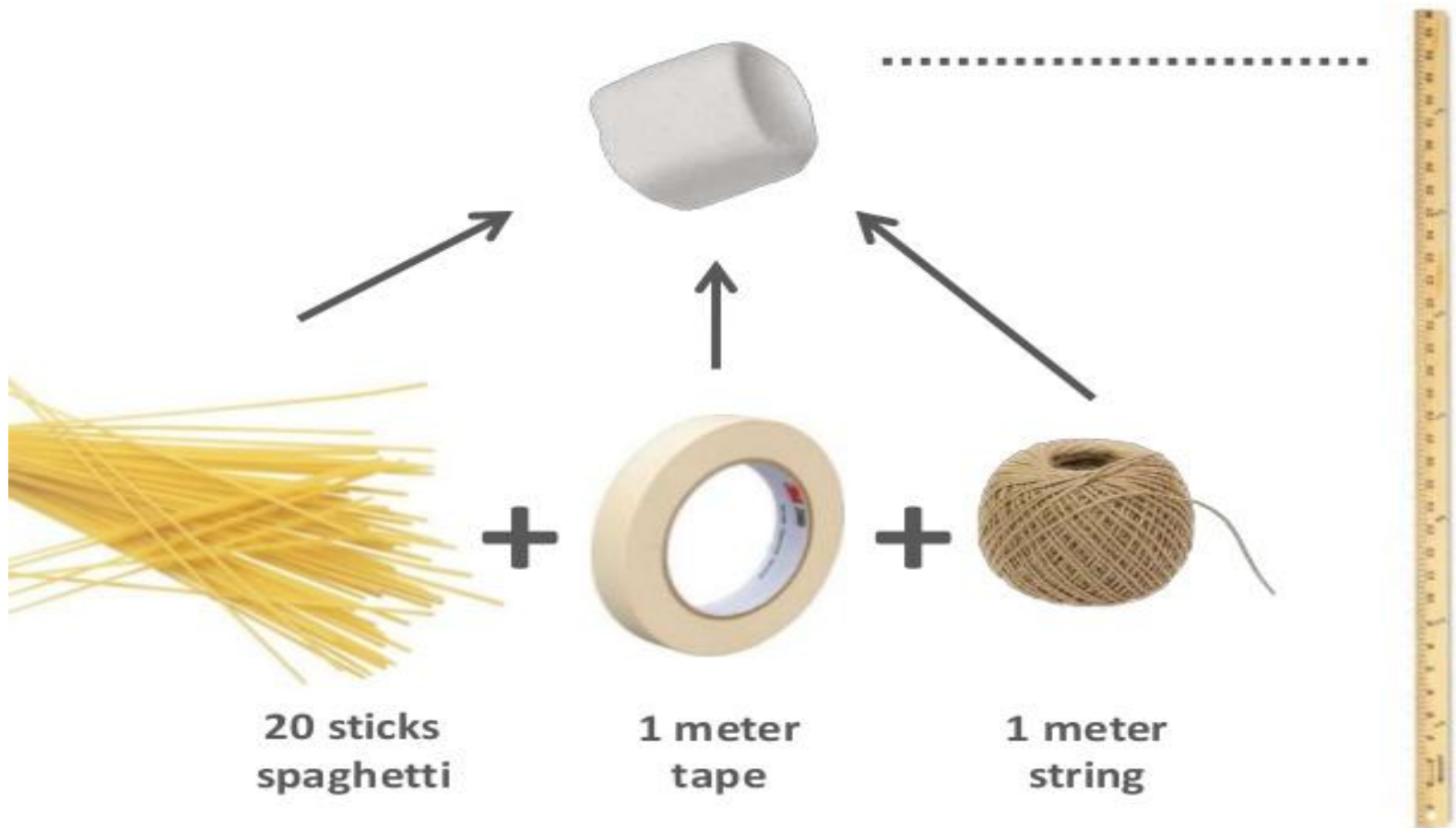
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The team task – building a tower



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Time 18 minutes

<http://www.online-stopwatch.com/countdown-timer/>



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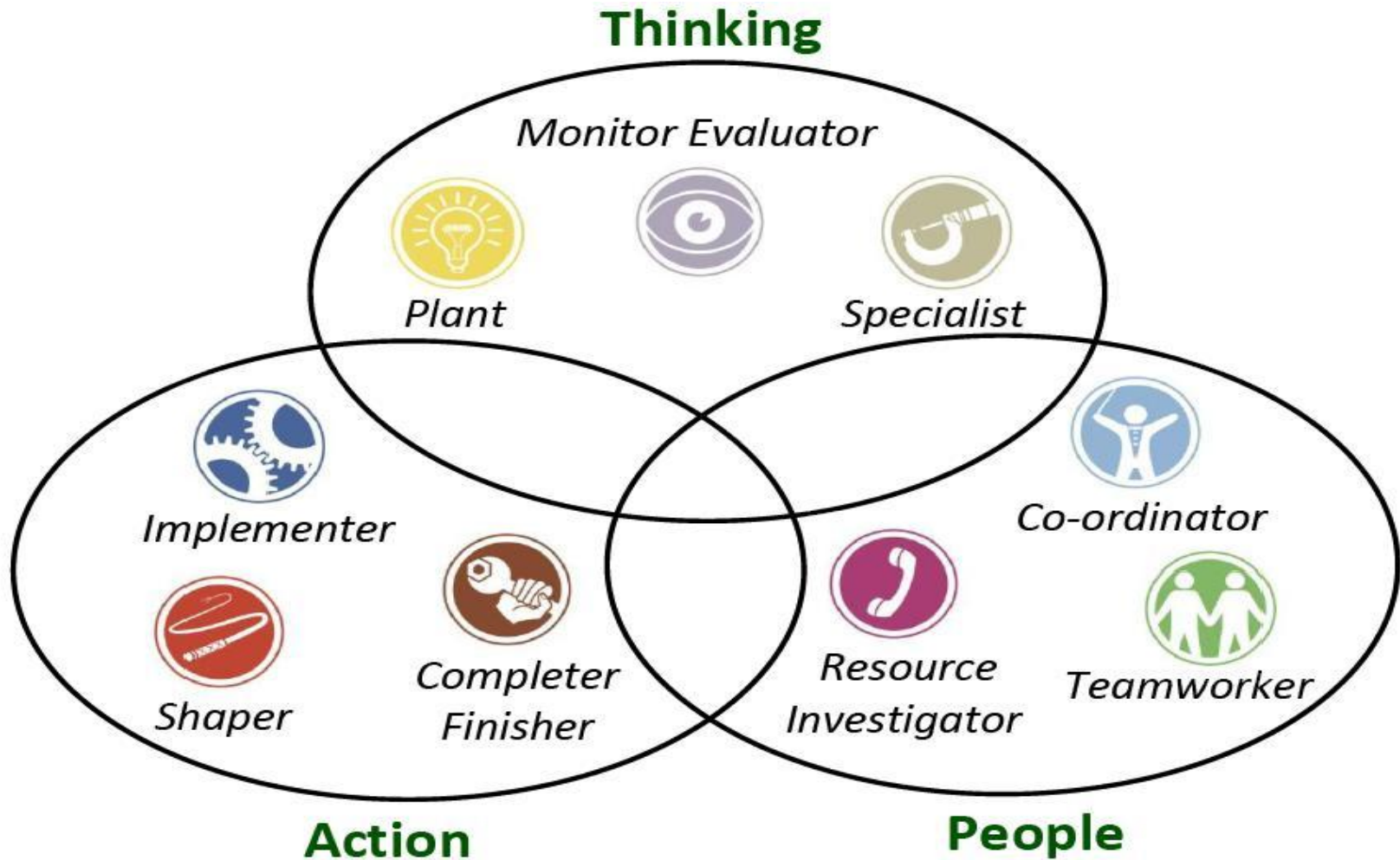
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Belbin's team roles

- **Plant** – creative, imaginative, generate ideas, solves difficult problems
- **Resource investigator** – outgoing, communicative, explores opportunities, develops contacts
- **Co-ordinator** – mature, confident, identifies talents, clarifies goals, delegates effectively
- **Shaper** – challenging, dynamic, thrives on pressure, good in overcoming obstacles
- **Monitor evaluator** – sober and strategic, sees all options, and judges accurately
- **Teamworker** – cooperative, diplomatic, socially oriented, mild and sensitive
- **Implementer** – well organised, practical, turns ideas into actions, enjoy routine
- **Completer Finisher** – pays attention to details, tends to finish the task, searches out errors
- **Specialist** – provides knowledge and skills



Belbin's team roles



Belbin Team Roles

Self Perception Inventory

Team formation

Activity 1

Discuss any ideas for team formation.



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Team formation principles

- Never use student-selected teams
- Create diverse teams
- Make the selection process transparent



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How to form the teams?

- spreading assets and liabilities
- avoiding pre-existing, cohesive sub-groups
- using a very public team formation process



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How big should the teams be?

- The group size depends on the goal we want to achieve and the tasks we give to the students
- Teams that have at least five members, they usually have the intellectual resources to complete the team assignments
- Groups larger than 7 tend to have difficulty in the team development process
- What group size in gaming is the best one?



Forming Fair Groups Quickly

1. Decide your sorting criteria
2. Prioritize your sorting criteria
3. Prepare your students
4. Call the first characteristic
5. Call the other characteristics
6. Count your students
7. Calculate how many groups you want
8. Have the groups “count off” by the total number of groups you want
9. Have group members assemble and introduce themselves



Activity 2

1. Read the principles
2. https://www.youtube.com/watch?v=sRNpaA8pU_0
3. Decide your forming group criteria according to the course you teach. Decide what characteristics would be the most important for you? Make a list of characteristics.



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- What kinds of assessment strategy/assessment tools concerning teams do use in your teaching practice?
- What kinds of assesment tools might be used in team-based learning?



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How to assess students' involvement/skills?

- Group reports on each game session / or every two/three sessions
- Individual reports/blogs
- Group discussion with the teacher – the strategy defense (what?, why?...)
- Assessment of contribution of group members
- ... ??



Resources

- Michaelsen L.K., Bauman Knight A., Fink L. D (ed.) (2004), Team-Based Learning: A Transformative Use of Small Groups in College Teaching, Stylus Publishing, Sterling, VA
- Belbin R. M. (2010), Team Roles at Work, Butterworth Heinemann, 2nd ed.
- <http://www.belbin.com/>
- <http://www.teambasedlearning.org/>



Teacher as a facilitator in educational process

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Activity 1.

- Think back to a particular teacher/trainer you have seen who you consider to be among the best
- Close your eyes and try to see what that person did that made the class/training more effective



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Facilitation skills

- Chris Christensen – The art of discussion leading

<https://vimeo.com/104311202>

- Verbal skills
- Non-verbal skills



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Make a list of features, characteristics,
behaviours concerning facilitator's **verbal skills**
and **non-verbal skills**



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Verbal skills

- Ask questions that encourages responses; open-ended questions
- Ask the other participants if they agree with a statement someone makes
- Be aware of your tone of voice, speak slowly and clearly
- Be sure the participants talk more than you do
- Don't answer all questions yourself; participants can answer each other's questions
- Paraphrase by repeating statements in your own words
- Summarize the discussion; draw conclusions
- Share a relevant personal experience



Non-verbal skills

- Maintain eye contact with everyone in the group
- Move around without distracting the group
- React to what people say by nodding, smiling, or other action that show you are listening
- Your body should be relaxed and at the same time be direct and confident



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Teacher's role **1.Direct experience**

- Present the objectives
- Clarify norms, rules
- Give the task/activity
- Groups members should get roles
- Are there any questions about the task?
- Is there anything you need to know?
- How's everything going?
- Have you thought about...?
- Can you say more about that?



Teacher's role 2. Reflecting on experience

- To help the learner reflect on what happened during phase 1 and what the experience meant.
- To ask questions, learners share their ideas and reactions with each other
- What happened?
- How did you feel when..?
- What did you notice about...?
- Do you agree? Why?
- What's your thought?
- Do you realize that...?



Teacher's role 3. Generalization

- To guide the learner
- To help the learner focus on the implications of the experience and reflection phases
- To make the learner acknowledge having learned something new
- To provide a summary
- To ask questions to enable the learner to reach his/her own conclusions
- What did you learn from this?
- What does all of this mean to you?
- Have you gained a new insight about?
- Are there any lessons to be learned?



Teacher's role 4. Application

- To provide advice
- To encourage the learner to try to improve new skills
- How can you apply this?
- What's your own idea for the project?
- How could you do this better?
- Can you see any difficulties?
- Do you have any questions concerning the issue?



Resources

- Training for Trainers for Development, Conducting a Workshop on Participatory Training Techniques (1995), The CEDPA Training Manual Series, Volume I, Washington.
- Christensen, C. R., David A. Garvin, and A. Sweet, eds. Education for Judgment: The Artistry of Discussion Leadership. Boston: Harvard Business School Press, 1991.
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