Collaborative argumentation in role-play discussions on adolescents' use of alcohol

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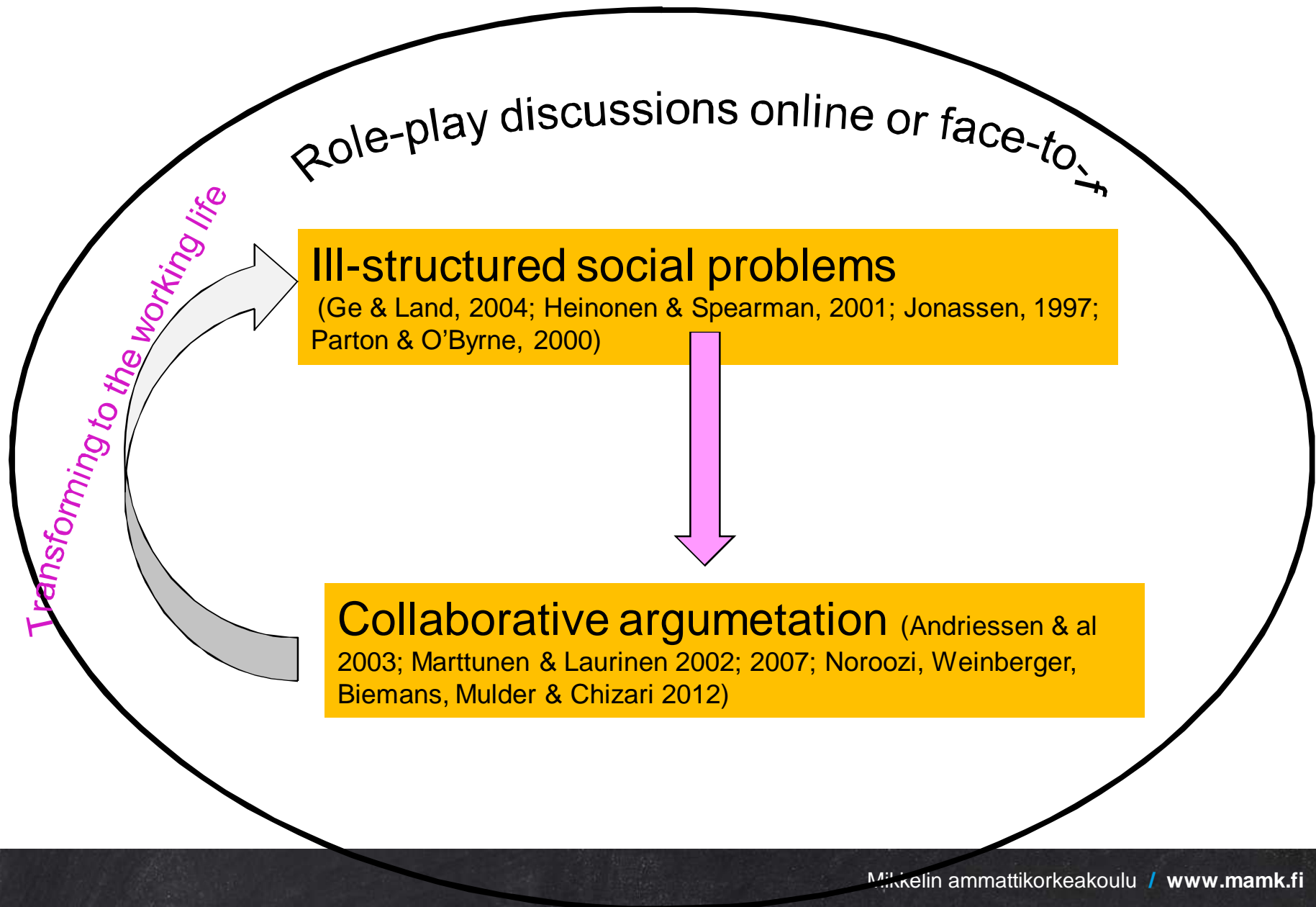
Collaborative argumentation

Discussion situation with

- a common goal: solutions for problems by contributing reasons and justifications from multiple viewpoints

- argumentation in order to provide shared understanding and multidimensional viewpoints (Andriessen & al., 2003, 3-11; Marttunen & Laurinen 2002; 2007)

- aim - not to win the debate or change others' approach- but to share, broaden and deepen participants' understanding (Noroozi, Weinberger)

Advantages of role-play discussions online and face-to-face

- engaging in actions in which core concepts of the learning have to be applied in unfamiliar situations (Barkley et al. 2005; DeNeve & Heppner 1997)

- understanding of different viewpoints : beliefs and values about a problem without a "correct" outcome (Maier, 2007; McLaughlan & Kirkpatrick, 2008; 2004: Linser, 2004; Jones, 2007)

- learning of communication and collaboration (Jones 2007; Naidu, Ip, and Linser 2000)

- applying of learning material to realistic every day situations (DeNeve & Heppner 1997; Moss 2000)

- improving skills for negotiation and communication, decision making, critical thinking; and peer discussion (Davidson, Preez, Gibb & Nell 2009; Fletcher 2001; Plous 2000; Prince, 2006; Sloman and Thompson 2009; Uggerhøj, 2007; Vapalahti, Marttunen, & Laurinen, 2010)

Learning environment of this study

Role-play discussions online or face-to-f

Transforming to the working life

Ill-structured social problems
 (Ge & Land, 2004; Heinonen & Spearman, 2001; Jonassen, 1997; Parton & O'Byrne, 2000)

Collaborative argumetation (Andriessen & al 2003; Marttunen & Laurinen 2002; 2007; Noroozi, Weinberger, Biemans, Mulder & Chizari 2012)

Participants

29 students (aged 19–51) in a Degree Program of Social Work in a Finnish University of Applied Sciences

- 15 students in online and 14 students in face-to-face groups, three small groups in both

Research questions

How did the students in their collaborative role-play discussions work for reaching a shared solution to the problem at hand?

1) What was the students' collaborative interaction like?

2) What was the students' argumentative interaction like?

3) How and what kind of solutions did the students create as a consequence of their discussions?

4) Were there differences in the students' collaborative argumentation between the face-to-face and online study modes?

Study design

Stage	Activity
1. Forming the small groups	Students wrote essays that were used to assess the level of their argumentation skills for forming online and face-to-face small groups (45 min.)
2. Instruction	Instructions for the online role-play discussions (10 min)
	Instructions for the face-to-face role-play discussions (10 min)
3. Role-play discussions	Online role-play discussions (3 groups, 4 days)
	Preparing for the face-to-face role-play discussions (3 groups, 45 min) and presenting face-to-face role-play discussion to other students of face-to-face groups (15 min/group, 45 min in total)

Data

- Students' asynchronous online discussions (three groups)

- Transcripted face-to-face discussions (three groups)

Data analysis

The unit of analysis: **Text fragment** (N online=305; N face-to-face=270):

1) **Collaboration fragments** (N online=112; N face-to-face=130)

2) **Argumentation fragments** (N online=189; N face-to-face=128)

3) **Solution fragments** (N online=4; N face-to-face=12)

Text fragments and the related variables

Text fragment	Variable	Value
Collaboration	Type of collaborative interaction	1 = question 2 = explanation 3 = acceptance 4 = support 5 = understanding 6 = appreciation 7 = completion
Argumentation	Level of justification related to the treatment of the problem	2 = high (standpoint with justification according to argumentation strategies: *generalization, analogy, sign, authority, principle, consequence*) 1= moderate (standpoint with irrelevant justification) 0 = low (standpoints without any justification)
	Novelty of viewpoint	1=new 2=old
Solution	Level of justification of solution	2 = high (solution with justification according argumentation strategies: *generalization, analogy, sign, authority, principle, consequence*) 1= moderate (solution with some justification) 0 = low (solution without any justification)
	Level of sharing the solution	2 = high (five members accept) 1= moderate (two to four members accept) 0 = low (no or one member accepts)

Statistical analyses

- Pearson Chi-Square

- Levene's T-test

- Mann-Whitney -test

Results: Collaboration

- More questions (61 vs. 37, $p<.001$) and appreciations (10 vs. 1, $p<.05$) in online than in face-to-face discussions

- More explanations (31 vs. 12, $p<.05$) and acceptances (33 vs. 9, $p<.001$) in face-to-face than in online discussions

Results: Argumentation

- High level justification (value 2):
  - In online discussions 29 % of standpoints
  - In face-to-face 20 % of standpoints

- The level of justifications was higher in the online than in the face-to-face discussion groups (M online= .86 vs. M face-to-face= .67, p<.05)

- Students presented more new viewpoints in the online discussions than in face-to-face discussions (f=110 vs. 92, p<.05)

Results: Level of solutions in endeavor to a solution

- There were no statistical significance in the quality of solutions (level of justifications and level of sharing the solution) when comparing the online and face-to-face groups

- $N_{online} = 4$

- $N_{face-to-face} = 12$

Discussion

- Online discussion environment provide better possibility   for argumentation (construction of justification for one's own standpoints), but in face-to-face discussions participants seem to consider each others' viewpoints and achieve common solutions more directly

- Interaction skills in both environments is needed → online interaction will increase in social pedagogical work

→ The online learning environments integrated into the face-to-face learning environment may provide important opportunities for learning, such as equality for interaction

- The students' argumentation skills seemed to be quite poor (see also e.g. Marttunen, Laurinen, Litosseliti, & Lund 2005; Andriessen, Baker, & Suthers 2003; van Bruggen, Kirschner, & Jochems 2002)

→ More argumentation practice is needed already during studies for preparing students to work with people and with communities in society

Why collaborative argumentation in social pedagogical work

- **Everyday situations**
  - easily provide confrontation
  - solving of unpredictable problems (Parton & O'Byrne, P., 2000; Jonassen & Kim, 2010, 439–457; Noroozi, Weinberger, Biemans, Mulder & Chizari, 2012)
    - ill-structured problems: open-ended; unclear information; indistinct rules and principles; many different solutions and paths to solutions (Chi & Glaser, 1985; Ge & Land, 2004; Jonassen, 1997; Voss & Post, 1988)
    - shared understanding including different viewpoints (Jokinen, Juhila, & Pösö, 1995)
- **New expertise** (Juhila 2004)
  - common knowledge and shared understanding
  - supporting other persons' construction of standpoints with the facilitation of (a) worker(s)
- **Working in communities and in multi-professional teams**

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Thank you!

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