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Argument Diagrams in Facebook: Facilitating the Formation of Scientifically Sound Opinions

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Students use Facebook to organize their classroom experiences [1], but hardly to share and form opinions on subject matters. We explore the benefits of argument diagrams for the formation of scientific opinion on behaviorism in Facebook. We aim at raising awareness of opinion conflict and structuring the argumentation with scripts [2]. A lab study with University students (ten dyads per condition) compared the influence of argument structuring (students built individual argument diagrams before discussing in Facebook) vs. no argument structuring (only Facebook discussion) on opinion formation, measured through opinion change. The argumentation script was implemented in the web-based system LASAD to support sound argumentation [3].

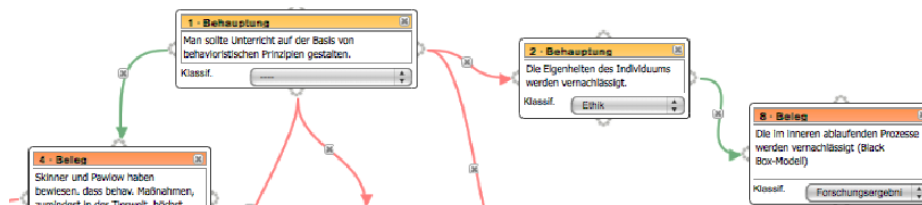


Fig. 1. View of LASAD diagram

Facebook discussions and conflict awareness led students of both conditions to change their opinions, $t(39)=8.84$, $p<.001$. Evidence suggests a connection between opinion change and the number of conflicts in a discussion. Together with a high correlation for no argument structuring between opinion change and knowledge gains, $r(20)=.54$, $p<.05$, the results suggest benefits of raising awareness of opinion conflicts in Facebook to facilitate scientific opinion formation and change.

References.

1. Lampe, C., Wohn, D., Vitak, J., Ellison, N., Wash, R.: Student use of Facebook for organizing collaborative classroom activities. *International Journal of Computer-Supported Collaborative Learning* 6(3), 329-347 (2011)
2. Weinberger, A., Stegmann, K., Fischer, F.: Learning to argue online: Scripted groups surpass individuals (unscripted groups do not). *Computers in Human Behavior* 26(4), 506-515 (2010)
3. Loll, F., Pinkwart, N., Scheuer, O., McLaren, B.M.: How Tough Should It Be? Simplifying the Development of Argumentation Systems using a Configurable Platform. To appear in: Pinkwart, N, McLaren, B.M. (eds.) *Educational Technologies for Teaching Argumentation Skills*, Bentham Science Publishers (in press)