



Expert and novice teachers managing classroom disruptions:

First findings from a pilot study in the lab peer-reviewed

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RESEARCH BACKGROUND

Managing **classroom disruptions** is a crucial aspect of effective **classroom management** (Evertson & Weinstein, 2006; Kounin, 2006). Therefore, teachers must be able to quickly notice and appropriately react to significant events in the classroom. This ability is called **classroom professional vision** (Goodwin, 1994; Sherin, 2001, 2007). Learning to develop such classroom management skills is a complicated and complex process (Wolff, Jarodzka & Boshuizen, 2017). Against the background of **expertise research** and the **expert-novice paradigm**, there are differences between beginning and experienced teachers in terms of effective classroom management (Lachner, Jarodzka & Nückles, 2016).

RESEARCH QUESTIONS

The aim of the pilot study was to investigate whether there's a difference in how expert and novice teachers manage scripted classroom disruptions.

Research question: To what extent does the perception of and reaction to disruptions differ by expertise in teaching experience?

Hypothesis: Disruptions do not last as long with expert teachers as with novice teachers, because experts visibly recognize disruptions faster than novices.

METHOD

PARTICIPANTS

N = 8 teachers (5 female, 3 male) on two levels of expertise:

(1) n = **six novice teachers** (four female, two male); mean age of years 25,02 (SD = 3,29); average of teaching experience: 0,35 years (SD = 0,56).

(2) n = **two expert teacher** (one female, one male); mean age of 48,05 years (SD = 3,42); average of teaching experience: 20 years (SD = 5).

DATA COLLECTION

Lab study with simulated scripted mini-lessons (10min per lesson)

teacher

Unscripted free reactions to disruptions

Wearing a head-mounted eye-tracker from **Tobii Pro Glasses 2**



class

Scripted: behavioral instructions only visible to class to simulate classroom disruptions (e.g. drawing on a sheet of paper)

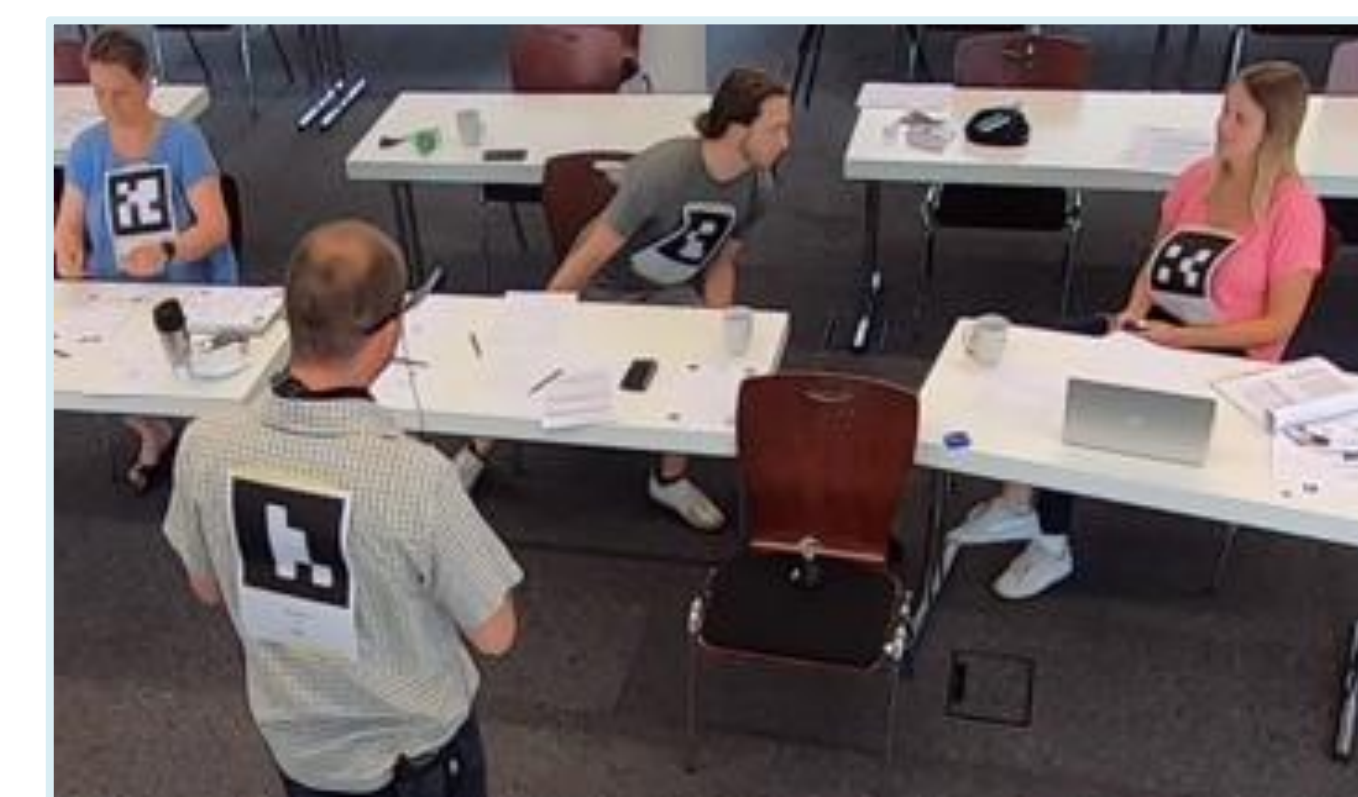
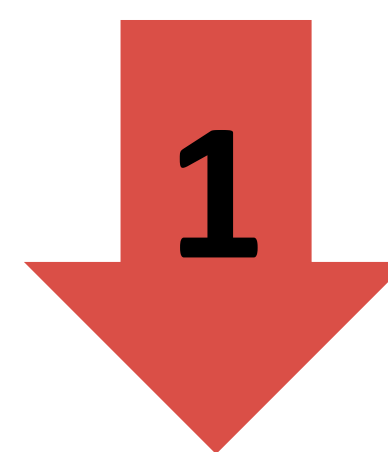
Multimodal data

Eye-tracking-data
Videorecordings of movement, mimics and gestures (4 cameras)
Audiorecordings of speech
Questionnaire-data from teacher and students

PROCEDURE/ TIMELINE

scripted disruption

(verbal, physical disruptions and lack of eagerness to learn; based on Lohmann (2015))

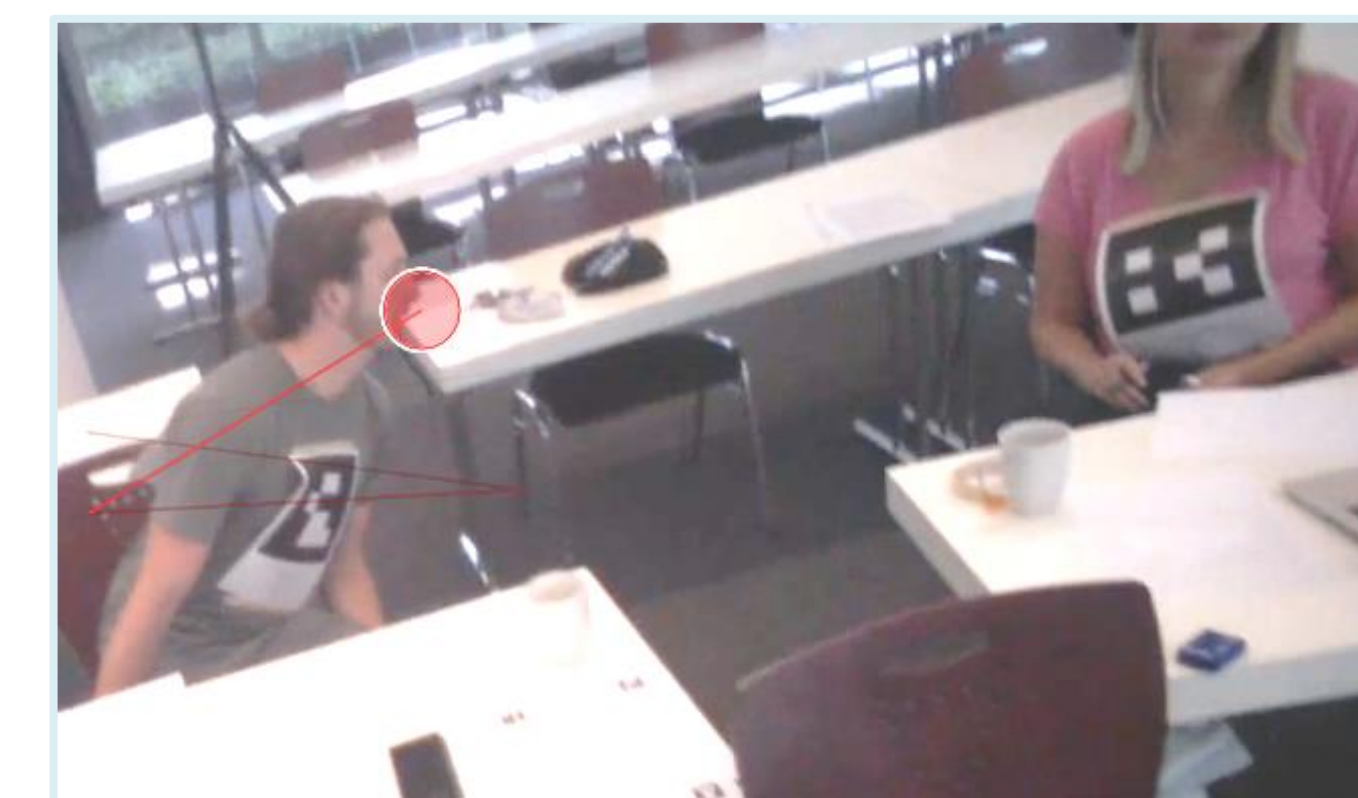
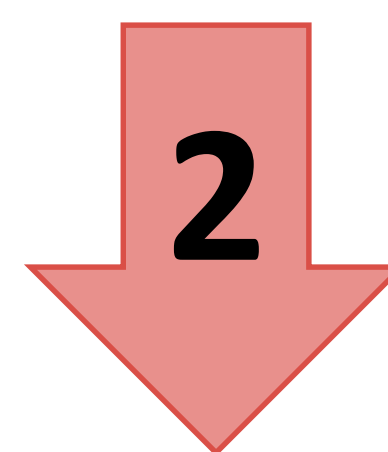


verbal disruption „chatting with neighbour“: addressed person bends over to his neighbour to start chatting

first fixation on disruptive person

Eye-tracking-data:

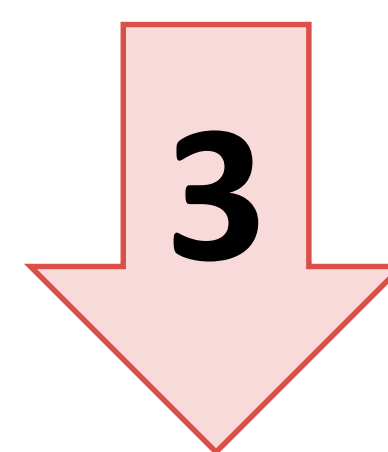
the teacher visibly recognizes the disruption as the gaze first fixates on the person performing the disruption.



the teacher's gaze fixates on the person chatting to his neighbour

first reaction to disruption

(verbal and non-verbal reactions)



the teacher reacts non-verbally with a gesture and verbally to the disruptive person asking the student to stop chatting

end of disruption

DISCUSSION AND OUTLOOK

Take-Home-Message: As expected, the disruptions last shorter in units taught by experts than units taught by novices. This difference goes back to the difference in the duration of phase 1, from disruption onset until first fixation. Differences in later phases were much less substantial.

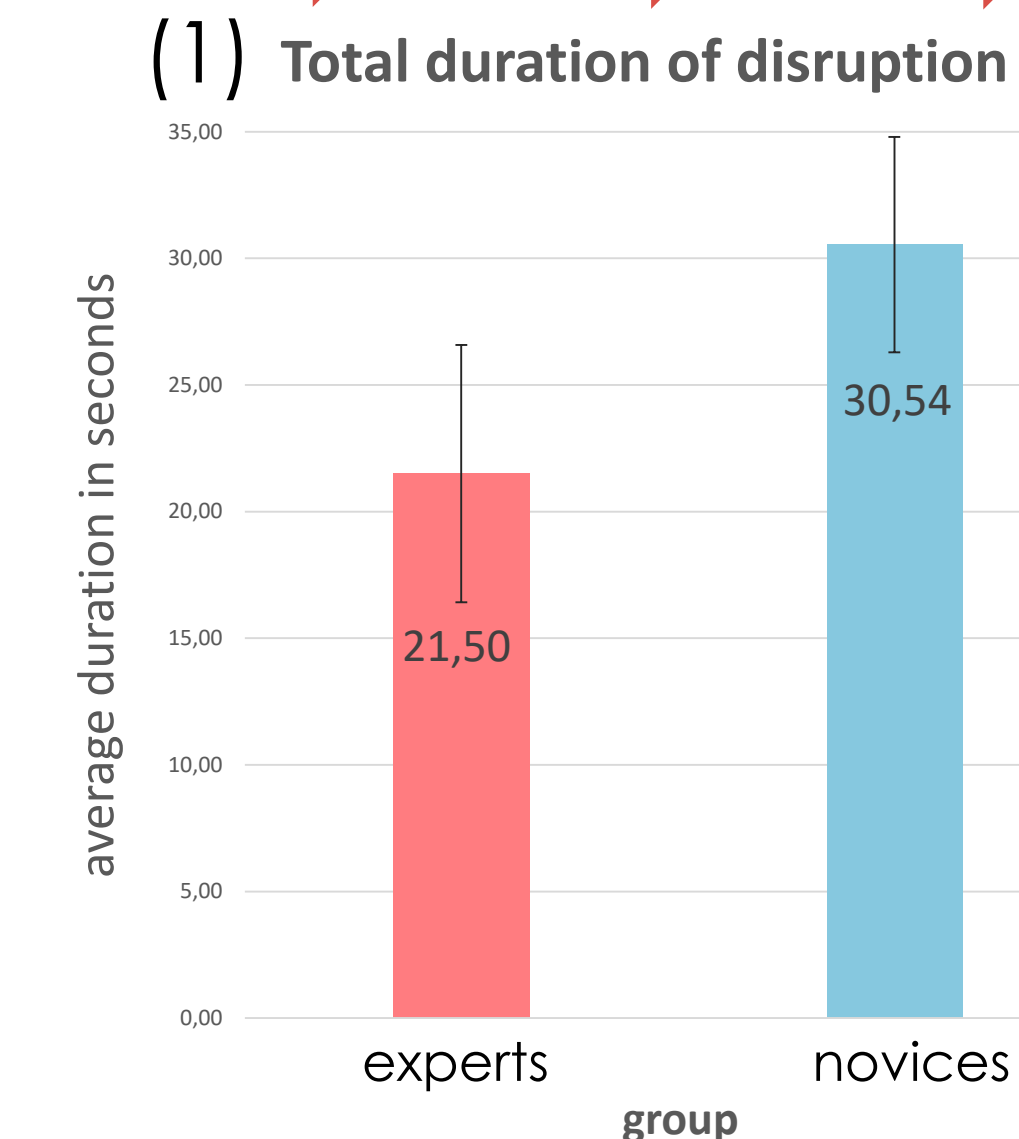
Next steps: Even though there were hardly any differences between experts and novices in terms of reaction duration and onset of reaction, it would be interesting to analyze the different types of reactions.

The study will be replicated with a **larger sample**.

RESULTS

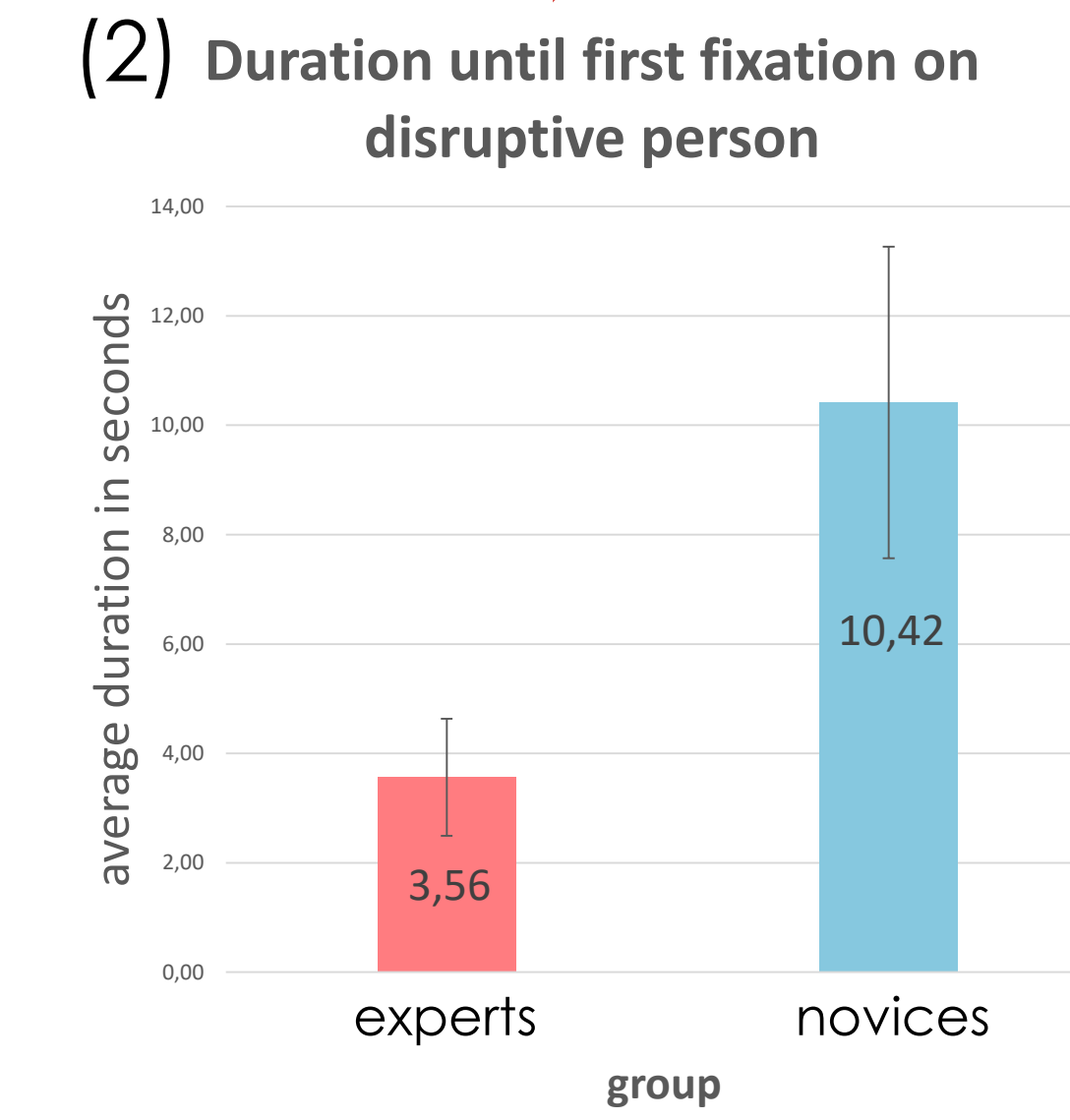
The videotaped lessons were coded by two trained raters. The mean¹ & max. difference² of seconds between the categories and interrater reliability³ were calculated.

(1) Total duration of disruption



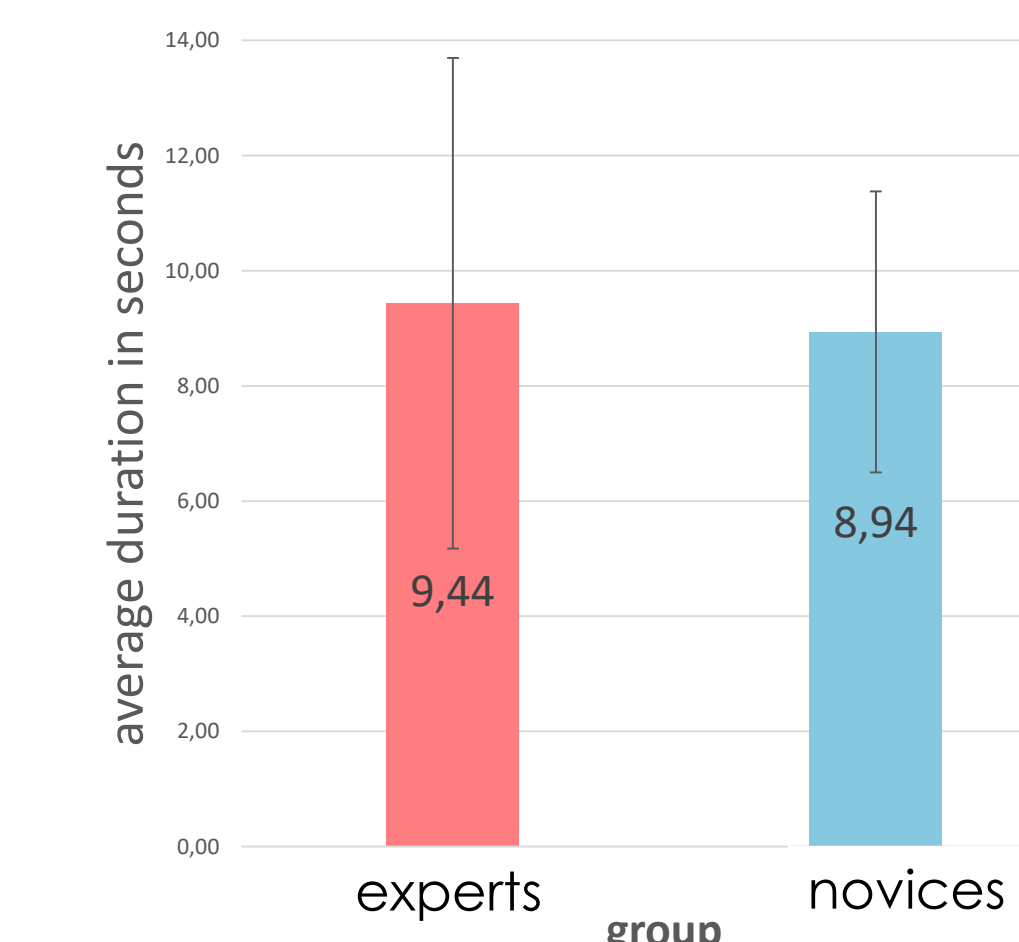
The disruptions last shorter in units taught by experts than units taught by novices (M¹ = 0,72s; max. difference² = 3s; IRR³ = 80%).

(2) Duration until first fixation on disruptive person



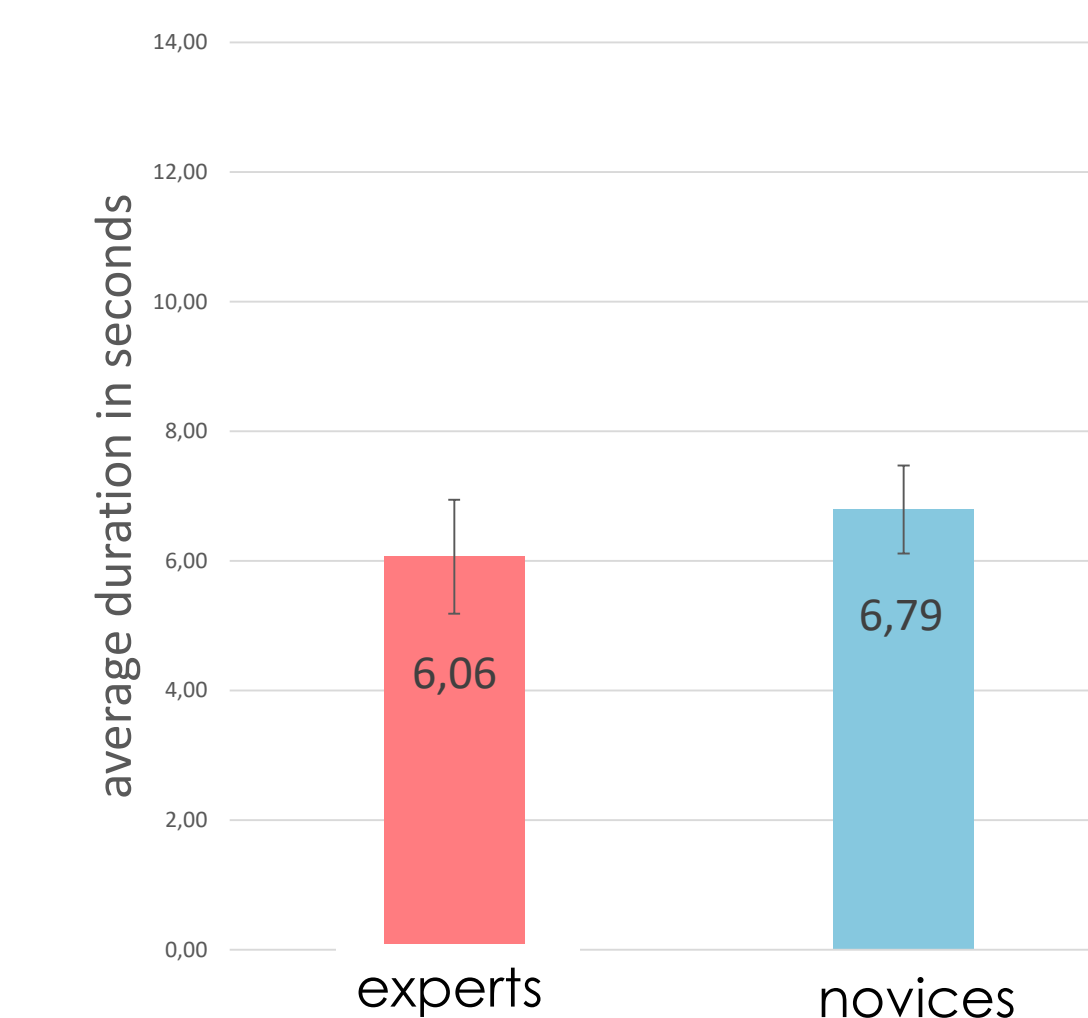
Experts recognize teaching disruptions more than twice as fast as novices (M¹ = 0,72s; max. difference² = 2s; IRR³ = 86%).

(3) Duration from first fixation to reaction



The duration from the first fixation on disruptions until the reaction hardly differs between experts and novices (M¹ = 1,14s; max. difference² = 4s; IRR³ = 78%).

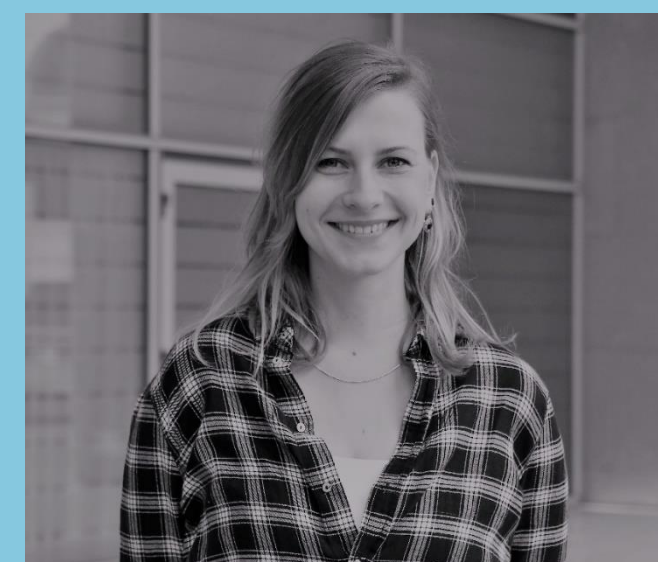
(4) Duration of reaction



The duration of reaction lasts for experts as for novice around 6 to 7s (M¹ = 1,03s; max. difference² = 3s; IRR³ = 75%).

Contact

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Evertson, C. M., & Weinstein, C. S. (Hrsg.). (2006). Handbook of classroom management: Research, practice, and contemporary issues. Lawrence Erlbaum Associates Publishers. • Goodwin, C. (1994). Professional vision. American Anthropologist, 96(3), 606-633. • Lachner, A., Jarodzka, H., & Nückles, M. (2016). What makes an expert teacher? Investigating teachers' professional vision and discourse abilities. Instructional Science, 44(3), 197-203. • Lohmann, G. (2015). Mit Schülern klarkommen. Professioneller Umgang mit Unterrichtsstörungen. • Sherin, M. (2001). Developing a professional vision of classroom events: Teaching elementary school mathematics. In Beyond classical pedagogy (pp. 75-93). Erlbaum. • Sherin, M. G. (2007). The development of teachers' professional vision in video clubs. Video Research in the Learning Sciences, 383-395. • Wolff, C. E., Jarodzka, H., & Boshuizen, H. P. (2017). See and tell: Differences between expert and novice teachers' interpretations of problematic classroom management events. Teaching and Teacher Education, 66, 295-308.