LEARNING TO NOTICE: PROFESSIONAL VISION AND CHALLENGING BEHAVIOUR IN THE CLASSROOM

Lenka Sokolová

Comenius University in Bratislava, Slovakia

Abstract. *Based on the Talis study teachers spend about 13 % of their teaching time keeping order in the classroom and solving disciplinary problems. Especially student and novice teachers often report tension and anxiety related to the misbehaviour, disruptive behaviour, and challenging classroom situations. When teachers need to cope with a challenging incident in the classroom they usually go through a three-phase process comprising a) identification of a situation (selective attention), b) interpretation of a scene (using either knowledge-based reasoning or implicit, intuitive interpretation) and c) intervention (taking action). This study aims to investigate the development of professional vision related to challenging situations in the classroom among student teachers. 40 junior (bachelor) and 40 senior (master) student teachers were watching a classroom video with the example of disruptive behaviour. Then they wrote short scripts describing the situation. Their answers were analysed in the context of identification, interpretation and intervention model. Both qualitative and quantitative differences were found between the groups. Implications for further research and teacher training are discussed.*
Keywords: challenging behaviour, misbehaviour, student teachers, professional vision.

Introduction

Each school class is a complex social group with its structure and rules. Teachers are expected to be sensitive to the classroom dynamics, to spot and understand the clues that might signal disciplinary problems, misbehaviour or any other kind of disruptive incident, and to take appropriate action. This skill develops over time, and it is difficult to teach prospective teachers how to deal with challenging classroom situations. Professional vision plays a crucial role in this process.

Teacher's professional vision

Professional vision has been studied in many occupations. This term was coined in 1994 by Ch. Goodwin, and it is described as a profession specific vision and interpretation of events and situations. Teacher's visual expertise is "the

ability to simultaneously perceive and interpret classroom situations for effective classroom management" (Wolff et al., 2016: 243). Classroom dynamics are very complex, diverse and fast-paced. That is why teacher's professional vision requires multi-dimensional cognitive processing. Seidel et al. (2010) and Lefstein and Snell (2010) described two cognitive dimensions of professional vision within teacher's work:

a) ***Selective attention*** – teacher's perception of classroom events. A teacher cannot follow every action in the classroom. This level of professional vision demonstrates teacher's ability to be sensitive enough to identify the relevant moments of the classroom activity. Expert teachers seem to show "efficient information-reducation abilities, even in classroom scenes that were previously unknown to them" (Wolff et al., 2016: p. 244).

b) ***Knowledge-based reasoning*** – teacher's reasoning about school scenes is based on their professional knowledge; the ability to understand the processes of teaching and learning differs from the common reasoning about school situations (such as reasoning of students or parents). The knowledge-based reasoning consists of three processes: 1) Description, an ability to describe in detail relevant aspect of the observed scenes. 2) Interpretation, an ability to connect the observed phenomena with the previously acquired knowledge. 3) Prediction, an ability to use the interconnection of scene interpretion and professional knowledge to evaluate and predict classroom events (Sherin & van Es, 2009; Seidel et al., 2010).

Teachers should use educational and psychological knowledge and research-based evidence to solve various classroom situations (i. e. knowledge-based reasoning). However, they often rely on their intuitive, implicit theories (Kiemer & Kollar, 2017). Pre-service and novice teachers tend to use subjective approach, especially when perceiving misbehaviour and challenging situations (Sokolová, Lemešová, & Jursová Zacharová, 2014). They seem to lack ability and experiences to implement professional knowledge in interpreting and solving these incidents.

Challenging behaviour in the classroom

Teachers and media often report on the changes in pupils' behaviour at school, increasing of negative, aggressive or "problem" behaviour (Lemešová, 2012). Pupils' behaviour affects teachers' professional well-being and occupational stress (Cabanová & Brozmanová, 2015). Challenging or "problem" behaviour is usually described in the context of child's characteristics. Slovak teachers described "problem" children as those who *suffer from disorders*

affecting their school achievements and participation; those who *break school rules*; and those who live in or are in contact with the *social environment at risk* (Lemešová, 2010). However, the definition of misbehaviour is to a certain extent a teacher's subjective construct. The perception of misbehaviour is associated mainly with the length of professional experience (Wolff et al., 2016; Cortina et al., 2015; Seidel et al., 2010). Especially student and novice teachers report tension and anxiety related to misbehaviour, disruptive behaviour, and challenging classroom situations (Sokolová, Lemešová, & Jursová Zacharová, 2014). However, teacher's perceptions are also influenced by his or her personality characteristics and cultural variables.

Based on the Talis study, teachers spend about 13 % of their teaching time keeping order in the classroom and solving disciplinary problems (OECD, 2007). The rates differ among countries participating in the survey. Teachers in Brazil, Malaysia or Portugal seem to face more disciplinary problems than teachers in Lithuania, Estonia or Slovakia (Fig. 1). There are also cross-cultural differences in the strategies that teachers use in their daily teaching routine (see e. g. Andreánska, 2015).
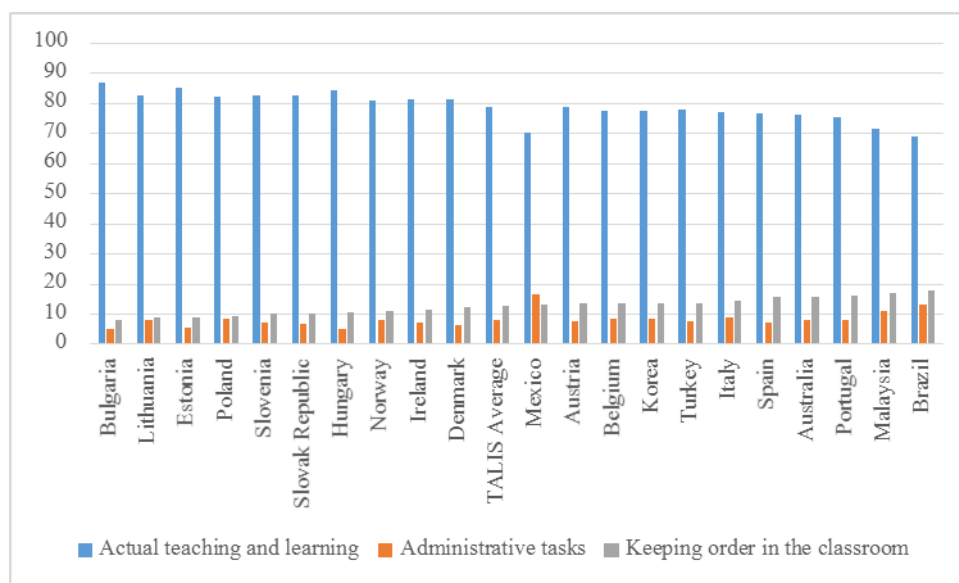

Figure 1. **Teachers' time spent on actual teaching and learning, administrative tasks, and keeping order in the classroom in the average lesson (OECD, 2007)**

When teachers need to cope with a challenging situation in the classroom they usually go through a three-phase process comprising: a) identification of a situation (selective attention), b) interpretation of a situation (using either knowledge-based reasoning or implicit, intuitive interpretation), and c) intervention (taking action). Kiemer and Kollar (2017) described the more detailed five-script process that experienced teachers activate to solve these

situations: a) identifying problems, b) reconstructing problems, c) building an explanatory model, d) deriving goals of an intervention, and e) selecting adequate actions. Based on their research (N = 339), both beginning and advanced student teachers only rarely showed the activities in an expected order. Pre-service training should help teachers to develop these scripts to be more efficient in classroom management. That is why it is important to analyse how student teachers build up their professional vision and classroom management strategies.

Method

This study aims to investigate the development of professional vision related to challenging situations in the classroom among student teachers. 40 junior (bachelor) and 40 senior (master) student teachers participated in this study as a part of seminars in psychology included in their pre-gradual training. At the time of data collection, junior student teachers had passed one compulsory course in psychology and one compulsory course of observational teaching practice. Senior student teachers had passed two compulsory courses in psychology, teaching practice and they were attending an optional course on classroom management and discipline based on the principles of Alfred Adler and Rudolf Dreikurs (Dreikurs, Grunwald, & Pepper, 1998). Both groups were watching the same sequence of classroom video (1 minute and 17 seconds) with an example of disruptive behaviour. In this sequence, a girl Amy seeked teacher's help, insisting that she was unable to do the assigned work on her own. It was a training video retrieved from www.behavioradvisor.com. After watching the video, the participants wrote short scripts describing the situation. Their answers were analysed in the context of word usage and identification, interpretation and intervention categories.

Results

We implemented two levels of data analysis. In the first phase, the comments were transcribed and thematic deductive coding was used to divide the comments into three predefined categories: identification (participant's descriptions of the scene and behaviour of individuals), interpretation (participant's explanatory comments describing why individuals acted in a certain way), and intervention (participant's suggestions for the solving of this situation, comments on teacher's coping behaviour).

Based on a descriptive content analysis of comments, junior student teachers tended to use more evaluative comments regarding both pupil's and teacher's behaviour. They focused their comments rather on the description of the scene than on the interpretation and intervention. Senior student teachers gave more

balanced comments on all three categories. Their descriptions of the scene were more objective, using terminology related to the adlerian model of classroom management (based on the content of the course they were attending at the time of data collection). In both, junior and senior student teachers groups some participants tended to label the behaviour as aggressive, violent, inappropriate or cheeky. The least developed ideas and comments were found in the category of interpretation in both groups.

The second level of analysis was a quantitive analysis of the number and frequency of words used to describe the scene. Word usage was analysed to identify differences in the way how junior and senior student teachers "notice activity and think about the classroom situations presented" (Wolff et al., 2016: 252). Word usage analysis (Table 1) revealed that junior student teachers used fewer words (42 %) to describe the scene than senior student teachers (58 %). The most significant difference between the groups was found in the category of intervention; senior student teachers used 92 % of words in this category. Junior student teachers tended to describe the situation in more detail, but they gave only a few comments on the interpretation and possible solution of the situation. On the other hand, senior student teachers used fewer words to identify the situation and focused more on the interpretation and intervention. The differences in all three categories were tested using chi square test. The differences are significant (identification $\chi2 = 58,87$, DF $= 32$, p $< 0,005$; interpretation $\chi2 = 51,87$, DF $= 12$, p $< 0,001$; intervention $\chi2 = 72,00$, DF $= 26$, p $< 0,005$).

Table 1 **Word usage**

	Total number of words/average number of words per comment/percentage			
	identification	*interpretation*	*intervention*	*sum*
Junior student teachers (n = 40)	1036 25,90 67%	171 4,28 33%	88 2,20 8%	1295 32,38 42%
Senior student teachers (n = 40)	521 13,03 33%	343 8,58 67%	959 23,98 92%	1823 45,58 58%
SUM (N = 80)	1557 19,46 100%	514 6,43 100%	1047 13,09 100%	3118 38,98 100%

To analyse the frequency of words used to describe the scene we selected only full active verbs, adjectives and substantives. The words of the same stem (e. g. help, helps, helping) were analysed as the same category. General nouns like "teacher", "pupil" or "children" were excluded from the analysis. The five most

frequent words used by both groups are shown in Table 2. Figures 2 and 3 show word clouds where the size of the letters illustrate the frequency of word usage.

Table 2 **The most frequent words used to describe the scene**

	Junior teacher students (n = 40)	Senior teacher students (n = 40)	**SUM (N = 80)**
help	54 (69%)	24 (31%)	78
attention	17 (27%)	46 (73%)	63
care	24 (50%)	24 (50%)	48
ignore	14 (40%)	21 (60%)	35
want	18 (69%)	8 (31%)	26

Junior student teachers focused on the child's need for *help* as a critical moment in the scene. The other frequently used words described that the teacher did not *care* or *ignored* the child, but the child still wanted teacher's *attention*. The most frequent adjectives used to describe the scene were *aggressive*, *violent*, *cheeky* and *angry*, describing the child's behaviour (Figure 2).

Fig. 2. **Frequence of words used by junior student teachers**

Senior student teachers identified the behaviour as *attention* or *power* seeking (based on Dreikurs' concept of mistaken goals of misbehaviour (Dreikurs et al., 1998), these were among the most frequently used words (Figure 3). The other frequently used words were the same as in the junior group (*ignore*, *help*,

care). The adjectives used to comment on the behaviour, or the situation (*aggressive* or *cheeky*) were less frequent than in a junior group. Senior student teachers used in their comments terminology of adlerian psychology classroom management (*attention, power, goal, consequence*, or *revenge*). These are examples of student teachers' tendency to connect the observed phenomena with the previously acquired knowledge (Figure 3).

Fig. 3. **Frequence of words used by senior student teachers**

Discussion

Teaching skills develop over time; teachers learn how to use professional knowledge more efficiently and develop their ability to notice essential segments of behaviour in the classroom. These skills develop not only in the course of teaching practice; they can be trained and developed within pre-gradual teacher training. Similarly to Kiemer and Kollar (2017), we identified differences in the description of classroom situation between junior and senior student teachers. The differences cover both content and quantity of words used in scripts. According to Wolff et al. (2016), teaching experience was associated with higher frequency of mental and action word categories used to describe classroom scenes. Word usage, in this case, may reveal the information on thinking, perceptual processing and attention to classroom events (Wolff et al., 2016).

Based on the results of our small scale study there are differences in the reasoning about classroom events among junior and senior student teachers. Similarly to the research of novice and expert teachers (Wolff, Jarodzka, & Boshuizen, 2017), junior student teachers are more focused on the situation context, while senior student teachers pay attention also to its reasons and solutions, or in other words "novices tell what they see, whereas experts extend their telling beyond what is seen" (Wolff, Jarodzka, & Boshuizen, 2017: 305). If

it is a part of teacher training, students tend to implement knowledge of classroom management in their reasoning about classroom scenes, even they do not have practical teaching experiences. That is why, initial teacher training should contain courses related to the classroom management, work with emotions in teaching (see e. g. Jursová Zacharová, 2015) and social interactions (Sokolová, Lemešová, & Jursová Zacharová, 2014).

As far as in both groups the least detailed comments were found in the category of interpretation, we find essential to develop student teachers' ability to understand and interpret behaviours in the classroom. They tend to identify the behaviour and to give solutions without deeper understading of the behaviour itself and its reasons. Even senior student teachers were able to use course knowledge to interpret the behaviour, their comments in this category were more concise than the comments in the category of description or intervention. Even the length of teaching practice seems to be an important factor influencing professional vision of teachers (Gegenfurtner & Seppänen, 2013; Seidel et al., 2010; Wolff, Jarodzka, & Boshuizen, 2017), we can see certain development also during the initial teacher training. If student teachers are provided with classroom relevant situations and materials, they may learn how to notice and interpret classroom events.

Study limitations: The results showed differences in the perception of the same classroom situation among junior and senior student teachers. These differences might be caused by the more advanced professional vision and professional knowledge of senior student teachers. They, however, cannot be interpreted as better skills or competences to solve classroom situations. The intervention strategies in the real classroom are complex actions, and even they are strongly influenced by the teacher's perception of the situation, one cannot predict the effectiveness of the teacher's intervention strategy from his or her description of the situation.

In the further research project, we plan to aggregate data on pre-service and in-service teachers' professional vision, on their personality characteristics and other demographic variables to identify some typical patterns in the perception of the challenging classroom scenes and to develop a more efficient course material in classroom management and discipline for pre-service teachers.

Conclusion

Based on our findings there are both qualitative and quantitative differences in the perception of challenging classroom scene between the beginning (junior) and advanced (senior) student teachers. Junior student teachers were more focused on describing the situation, while senior student teachers showed tendency to interpret the situation and suggest some intervention. These results offer an insight

into changes of the professional vision in the course of teacher training. The complex interpretation of these differences, however, requires further investigation and comparison with experienced in-service teachers.

Acknowledgement

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